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ABSTRACT

This document synthesizes reports on quality issues and trends in vocational education and training (VET) in Belgium, Denmark, Germany, Greece, the Netherlands, Portugal, and Spain. Discussed in the report's five sections are the following topics: quality concepts and their application to VET (VET in Europe, quality concepts and their application to education and training, the increased emphasis on quality in VET); quality assurance and control systems in VET (quality control systems, evaluation systems as part of quality control systems); quality systems in European VET (quality systems for initial VET, quality systems and models in continuing VET); vocational training quality issues in Europe (the changing role of public authorities and social partners, reconciliation of decentralization with central quality standards, quality approaches as a means of raising VET's status, contribution of quality systems to market transparency, availability of tools to support the adoption of quality approaches, relevance and added value of industrial quality practice to VET, European cooperation and the European dimension of the quality debate); and a framework for analyzing quality of VET and recommendations for further research. Contains 64 references. (MN)

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Quality issues and trends in vocational education and training in Europe

European Centre for the Development of Vocational Training

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Quality issues and trends in vocational education and training in Europe

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Preface

This report is intended as a first contribution of CEDEFOP to the policy debate on quality in vocational training at European, national and regional levels within the framework of the Council Resolution of 5 December 1994 on the quality and attractiveness of vocational education and training. It has been developed from a synthesis of seven short national reports (Belgium, Denmark, Germany, Greece, the Netherlands, Portugal, and Spain) on the same topic . These information sources were complemented by additional recent reports and books on the same and similar topics (see Bibliography). Therefore, this report is the fruit of the efforts and findings of many experts in the field - without which it would have been impossible to finalise in the limited time available.

Although this report provides a synthesis of ideas and experiences, it was not designed as a comparative study. Rather, its aim is to set out the different issues and concepts, drawing on, and - when appropriate - illustrated by, the experience from the seven European states mentioned. This more conceptual approach was guided by CEDEFOP's wish to use this report as a platform for further research and study work in this area. Since many readers may not be familiar with some of the more recent quality paradigms in education and training, part of the report develops the quality concepts and their relevance for the vocational education and training sector.

The report deals with the area of '***vocational education and training***'. Those familiar with the field know that this term is interpreted in different ways by people in European countries. This was also obvious from the national reports referred to above. To avoid any misunderstanding, both vocational education and vocational training which take place at the level of secondary education, as well as, public and private continuing vocational education and vocational training in companies are discussed in this report. It was felt that the inclusion of both areas, despite their different characteristics, was necesary at this stage.

The question of quality in higher education was not included in the focus of the present study because it does not fall under CEDEFOP´s mandate and fields of intervention. In company vocational training is not thoroughly treated in this report because a major FORCE study on quality assurance in in-house continuing training with case studies from nine Member States drawn by E. Severing and Th. Stahl, (which was just completed when we started our project) was taken into account. More general, most of the report treats quality issues from the perspective of the involvement of public authorities and, to a lesser extent, from the point of view of trainees and training providers. For this reason self-learning has also been excluded.

The report concludes with a presentation of models which might be used for analysing quality issues in vocational education and training. Also, a comprehensive list of research topics and subjects for further data gathering and analysis is presented, which will hopefully serve to stimulate further work in this area.

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Tina Bertzeletou

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Quality issues and trends in Vocational Education and Training in Europe

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Chapter 1 Quality concepts and their application to vocational education and training

1.1 Vocational education and training in Europe

1.1.1 The difference between initial and continuing vocational training

When discussing the topics of ***quality*** and ***quality assurance*** in ***vocational education and training***, it is necessary to distinguish between '***initial***' and '***continuing***' vocational education and training.

In this report, we define ***'initial' vocational education and training*** as the vocational part of the secondary education system, i.e. leading to recognised qualifications at that level. In Europe, we have two main types of such systems. One (e.g. Belgium, Italy) is mainly or exclusively school-based, with teaching predominantly being given in technical or vocational schools which are firmly embedded in the traditions and organisational forms of the overall national school system. The second type (e.g. Germany, Denmark) is predominantly apprenticeship based, with a large part of the training taking place within, and under the responsibility, of firms. Over the last years one can see a trend developing in several countries for both types or a mixture to exist (e.g. the Netherlands, Spain).

By contrast, ***'continuing' vocational education and training*** consists of vocational training programmes and courses for people who are (or could be) at work and/or have already some kind of general or vocational qualification. Although part of such training could lead to recognized qualifications, continuing education and training displays many characteristics which make it different from initial vocational education and training:

- in general, there is a very broad range of providers of different types, both public and private
- programmes are mostly measured in terms of days and weeks, rather than years
- training is often targeted at specific groups: unemployed people, workers from certain sectors
- several forms of state intervention or subsidy exist.

In reality, the boundary line between initial and continuing vocational education and training is not clear, in particular when 'continuing' vocational education and training is:

- delivered by institutions also providing secondary education level qualifications
- leading to qualifications at secondary rather than advanced level
- subsidized fully by the state
- delivered immediately after a first qualification, before trainees have started working.

For the purposes of this report, it is however not necessary to develop these distinctions further (it would also require a country-by-country analysis). What is more important is to realise that, within continuing vocational education and training, from a quality assurance point of view, it is often useful to make the distinction between provision paid for by the state, and courses paid for by employers or individuals. Thus, in many countries 'initial continuing vocational education' has strong resemblance to 'initial vocational education and training'. For instance, in Denmark, many of the fundamental principles in the steering of initial vocational education under the responsibility of the Ministry of Education, and the state-funded AMU-system for the training of workers, are very similar, particularly the strong influence of the social partners.

For ease of use, the following abbreviations will often be used in this report:

VET:	Vocational Education and Training
IVET:	Initial Vocational Education and Training
CVET:	Continuing Vocational Education and Training
CET:	Continuing Education and Training
CVT:	Continuing Vocational Training

1.1.2 European diversity in vocational education

An important complication in discussing quality concepts in VET at a European level, are the considerable differences between Member States in the organisation and characteristics of the VET system. Information about these differences can be found in many other CEDEFOP documents; let it just be mentioned here that from a quality and quality assurance point of view, several possible attributes need to be mentioned, such as:

- The extent of ***involvement of the Social Partners*** in the organisation and content of the VET system, in particular the initial VET provision.

While this involvement is well known for countries like Germany, it appears to be growing in several countries. For instance, in Portugal the Social Dialogue in the area of vocational training has been reinforced since the early nineties. The social partners now intervene in the following areas: definition, guidance and evaluation of training policy; participation in the coordination, training and certification; and monitoring the policy development in vocational training, in particular in the scope of European programmes and initiatives.

- The role and ***involvement of public authorities*** in the provision and setting of boundaries for part of the ***CVET*** arrangements. Some Member States advocate and apply a 'laissez-faire' logic where they leave it to the market to let the CVET develop. Others set criteria and standards for at least part of the provision (e.g. in Greece for most of the state-subsidized CVT).

- The ***role of apprenticeship training*** within the IVET curriculum and its adaptation to the needs of the industrial sectors concerned. If industry is regarded as the customer of VET, than it is obvious that its strong involvement in apprenticeship systems which prepare young people for a job (as in Germany) presents an inherent quality advantage which other systems lack.

- The different ***boundary lines between initial and continuing VET*** in Member States. This problem is related to the different Ministries in charge of parts of the VET system, the type of organisations offering a range of VET courses, the role of state support for CVT, and even the compulsory nature of initial VET.

- Whether the systems (or part of them) are predominantly ***self-controlled, or monitored under state control***. For instance, the VET system in Denmark is characterized by social partners who play a decisive role in development and overall direction, so that the term "vocational self-government" appears well-justified. On the other hand, in Belgium, social partners are almost invisible in initial VET, with the Ministry of Education controlling the system through the inspectorate.

- The ***boundaries between general and vocational education***, both in terms of content and organisation. In Belgium, for instance, initial VET is part of the secondary school system, with its culture, values and quality paradigms.

Such differences between the European VET systems, have a major impact on how quality has been traditionally ensured and how quality assurance systems operate. Note also that in certain European countries - e.g. Belgium and Spain - education is to a large extent the responsibility of communities/regions which are developing different systems, with differing control mechanisms

Despite these differences, it has also to be recognised that national VET systems have much in common, including, as this report will indicate, the growing concern about quality issues. European programmes like COMETT, PETRA and FORCE, now merged into the LEONARDO programme, have shown that cooperation and fruitful exchange of information, practices and outcomes is possible and worthwhile.

1.1.3 Developments and trends in vocational education and training

1.1.3.1 General trends

Over the last two decades many and varied developments have taken place in European vocational education. Although strong differences may be observed, there are also many similarities, in particular in relation to quality issues - as will become obvious throughout this report.

As a general rule, the pace of change seems to be accelerating. Why is this the case? The more general response is that (1) society itself is changing at a faster rate, because of technological, economic and social developments, and (2) that the VET system is increasingly expected to be responsive to the changing demands.

The current VET structures are major economic and sociological systems that have been shaped by pedagogical, social, cultural, economical and employment considerations. Many factors influence these structures, but their relative importance tends to change over time and also by type of education provision. Even in the private training sector, economic and employment arguments have not been the only factors present in its development - consider for instance the social considerations for the training of unemployed or low skilled people.

Factors which have contributed in most European countries in the re-shaping of VET systems - both at initial and continuing education and training level - include:

- the recognition of the importance of a highly qualified workforce for long term sustainability - which is incompatible with a flow of unskilled young people to the labour market
- the need to follow the technological innovations and organisational changes in the economy
- the growing awareness of the need to raise the status of initial VET
- the persistence of the economic crisis, with its impact on unemployment levels, particularly for those without decent qualifications
- the changing views of the role of human resource policies
- the need for continuous upgrading and re-training of the workforce, conditioned by the availability of a well-established CET provision.

In addition, specific factors apply for individual countries. For instance, in Portugal the launching of many new and diversified initiatives in the area of vocational training, not only results from the factors mentioned above, but also from recommendations of international organisations (OECD, UNESCO, EU) and the use of community funds for vocational training have also had a great impact. And in Belgium, at least part of the recent developments can be attributed to the complete regionalisation of education and training responsibilities.

Since in most countries the VET system - in particular initial VET - is moving away from a uniform 'mass education' culture towards a more pronounced 'client' orientation, the quality issue quite naturally emerges as a concern of the citizens: they expect the school or the providers of vocational training to deliver a professional educational service. This follows a more general trend in society whereby customers have ever increasing expectations about the services they receive - even when it concerns a public service for which they don't have to pay.

1.1.3.2 Changes in initial VET

In initial VET systems, recent developments have been far from uniform across Europe. While all countries have witnessed an enormous expansion in CVT, the developments in initial VET have been different: in some countries, e.g. Greece, Spain, Portugal, and the UK the developments continue at a fast rate (a catching-up phenomenon linked to the increasing school-leaving age), while others see a stabilisation in numbers (or even loss to the general education system). In all countries however, discussions on quality issues are on the agenda. Some important trends which can be witnessed in several countries - and which relate to the quality of initial VET - include:

- An ***increase of the average age*** at which pupils leave vocational education. This produces more qualified young people, but also increases the need to ensure that these qualifications are relevant and in line with demand from society, notably industry. The new Portuguese vocational schools, created in 1989, not only seek to impart new technical competence but also new core skills - which are of a personal, social and professional nature. The organisation of the training is based upon the principle that solid vocational training in a modern society which is constantly changing, should be of an overall and qualifying nature, and not linked to a narrow area of work intervention.

- A ***reinforcement of the role of Social Partners*** in the initial VET system. In countries such as Germany and Denmark, a long tradition exists in this matter, and other countries (e.g. Spain and the Netherlands) are reinforcing this element. However, some countries, such as Belgium, remain quite reluctant in this area, sticking to the principle that public authorities and schools have the responsibility for ensuring the quality of initial vocational education.

- A trend towards ***higher accountability of vocational schools***, in general linked to a decentralisation move which has yielded greater autonomy. This tendency varies strongly across countries. In some countries (e.g. Flemish schools in Belgium) a first step has been the reorganisation of the inspectorate towards a system of team-based school audits. More important changes have been noted in Denmark: with the reform of the VET system the Ministry of Education's supervisory and control has changed considerably, and is now essentially based on far-reaching steering by targets and frames ('management by objectives'). This principle applies both for financial management, and for the curricula of VET courses: detailed, centrally defined syllabi have been discarded completely.

- A move towards the formulation of ***vocational training targets*** or final education objectives which gradually replace detailed curricula (e.g. the Netherlands, Denmark and the UK). In the UK, ambitious targets have been set to have certain percentages of the population reach certain levels of vocational qualifications (although this does not concern initial VET only).

- A recognition that initial vocational education institutes must have - within the framework of national criteria - sufficient freedom in order to become ***more flexible*** and be ***more responsive*** to local needs. In Denmark, through a new legislation a new funding regime has been introduced, VET curricula were simplified, and the roles of the School Boards were strengthened. The VET reform implemented in 1991 brought fundamental changes to the relationship between colleges (more competition), the financial management of colleges (student-based but untied grants), and further decentralization (e.g. colleges can decide to offer new VET courses without prior approval from the Ministry of Education).

- The reinforcement or introduction of an ***apprenticeship system*** in countries where it was almost nonexisting, such as Spain and Portugal. However, this system is not always regarded as a full and integral part of the education system - partially reflected in its non-compulsory nature (Portugal, Belgium).

- A modest but increasing number of schools involved in ***Total Quality Management*** (TQM) approaches. Examples of such developments are increasingly found in all European countries, with some interesting developments in Denmark, Belgium, Netherlands and the UK. For example, the Danish KUP(*Content and Quality Development*)-projects have sought to avoid basing quality evaluations on purely quantitative factors. The projects supported under the KUP-programme may be seen to have developed "quality awareness" in vocational schools, rather than establishing "quality inspection".

1.1.3.3 Changes in continuing vocational education and training

In all European countries, the CVET structure is a very complex system, characterised by a multitude of providers, multiple intervention mechanisms by public authorities, and a very wide rage of offerings. In addition, it is a sector which has witnessed a phenomenal growth over the last decades, to a point where the total spending on CET now exceeds in many countries the public spending on higher education.

An important difference with IVET systems, is the role of the state. Whilst initial VET systems feature, to a varying extent, direct governmental regulation, in the CVET sector the role of the state is much more limited. Public authorities typically confine themselves to setting framework conditions and intervene through public or semi-public vocational training providers. They may also influence the market because of their importance as customers of training. It should be noted that (1) the level of state intervention differs strongly by country, and (2) the mechanisms of public involvement and the training providers which are funded directly or indirectly, are much more numerous and of different natures compared to initial VET.

Unlike initial VET, most countries have seen the development of a set of private providers of CVET, who operate entirely or in-part within the free market mechanisms. This includes in general four types of organisations:

- public institutions, which market part of their offerings on the free market to individuals and companies
- non-profit associations, e.g. focusing on a particular sector or type of training
- commercial training companies, which seek to make a profit from organising and/or delivering training
- training departments of larger companies which sometimes open up their provision to other interested parties (e.g. sub-contractors, customers).

In addition, there are considerable efforts of in-company training which, although not available on the market, should be considered as part of the CVET provision. In Germany, a company like Siemens trains 150 000 of its employees every year, most of it through its own training provision.

The legal framework in which these providers operate - defined in terms of specific requirements which CET providers must meet, is in general fairly limited (e.g. Portugal, Belgium, Netherlands) or only applicable to certain forms of CVET, in particular those programmes funded or recognized by the state (e.g. Greece, Germany). In general, there is substantial state control for training provided free of charge (funded by the state) to unemployed people. Given the continuously high unemployment rates in many European countries, this is a sector which has grown in importance - and thus also public authorities' control of the quality of training delivered - both in view of its effectiveness and for cost accountancy reasons.

In less-developed European countries, the growth of the CVET sector has initially been slower, because changes in the economic structures and the need for further training were not felt as being so strong as

in Europe's more developed regions. However, there appears now to be a catching-up phenomenon, which has been fuelled by their integration into the European Union, the need for training which resulted from that process, and the availability of community funds for vocational training in the lesser developed regions.

1.2 Quality concepts and their application to education and training

1.2.1 Quality concepts and terminology

Quality is a multi-dimensional and relative concept. As such, it is not possible to give a unique definition which fits all circumstances. However, it is possible to distinguish some important viewpoints and perceptions to quality which people use when they assess:

- quality as excellence, as something special
- product-oriented quality (quality can be measured)
- quality as the fulfilment of customer expectations
- process-oriented quality (quality is conformance to specifications)
- price/benefit-oriented quality (the value approach).

Such quality perceptions may apply, alone or in combination, to any type of product or service, including vocational education and training.

Two important quality concepts are '***quality of design***' and '***quality of conformance***'. Quality of design is the capacity of an organisation to design, plan and specify products and services which will be considered to be of quality by the end-users. Quality of conformance is the ability of an organisation to meet the design, planning and specifications, and to respect agreements. Obviously, these two quality concepts are applicable to VET programmes: Quality of design refers to training specifications which meet the requirements of the particular profession, skill or job ('Are the programmes suitable?'). Clearly, the involvement of social partners and/or the customers will facilitate this task. Quality of conformance is the capacity of a training provider to deliver the programme and meet the specifications ('Is the provider performing well?'). It is at this level that quality assurance and quality control mechanisms play an important role. One should keep in mind, that quality of design usually requires different skills and people than methods for ensuring quality of conformance.

The notion of quality has recently been enlarged to that of '***Total Quality Management***' (TQM) which refers to an organisational approach for continuously delivering high quality. Its main principles are:

- customer orientation
- continuous quality improvement
- quality assurance
- prevention instead of detection of quality problems
- process orientation.

TQM-based organisations operate on the basis of:

- strong leadership from management as regards quality
- quality is seen as the responsibility of everybody
- emphasis on team-work
- focus on facts, data and measurements
- use of appropriate quality tools and methods

1.2.2 Quality concepts applied to vocational education and training

Quality is not a new subject in education. Institutions, teachers, administrators and policy makers have always been concerned with quality. Even without adopting a formal 'quality' approach, VET providers have needed to develop methods, norms, procedures and standards that allowed them to ensure the quality of their provision. However, the notion of quality has often been ill-defined, defined in a narrow sense, or not defined at all. Moreover, it is only fairly recently that quality concepts and approaches adopted successfully in business environments have started to penetrate the VET world.

This recent trend reflects a more general phenomenon, which is that the dominant quality concepts in education and training tend to change over time. The different viewpoints from which quality in education and training has been considered can be summarized as follows:

- Quality from a ***didactic and/or pedagogical*** point of view, e.g. issues like teaching and training effectiveness, appropriateness of flexible learning, and compensation programmes - education quality seen as the optimization of the teaching and learning process.

- Quality from a ***(macro)-economic*** point of view, with considerations on the return on investment of education and training (also by companies), and topics like the effects and costs of class size - education quality seen as the optimization of the education and training costs.

- Quality from a ***social or sociological*** point of view, including issues like providing equal opportunities for disadvantaged groups - education quality seen as the optimization of the response to social demand for education.

- Quality from a ***customer*** point of view, e.g. the capacity of schools and training providers to respond to particular demands from clients (students, pupils, parents, employers,..) to deliver the education and training required - education quality seen as the optimization of the demand.

- Quality from a ***management*** point of view, with the focus on effective schools and ***Total Quality Management (TQM)*** methods in education institutions - education quality seen as the optimisation of the organisation and processes of education.

The order in which these different viewpoints are listed reflects to some extent the shifts in emphasis over the last decades in many European countries. However, it is not so much a question of replacing 'old' paradigms, but rather one of adding 'new' dimensions - which reflects the growing complexity of the education system and the objectives it has to meet.

It is interesting to note that, although the term 'quality' is increasingly finding its way into the VET legislation of European countries, the notion is not necessarily explained - leaving some ambiguity as to which perception of quality has been in mind of legislators. Some formulations suggest that quality is considered as an absolute, measurable concept, but recent laws in some countries suggest the acceptance of the fact that quality in education and training must be related to the values and aims and objectives of three user groups: the students, the labour market purchasers, and the society in general. Since these groups often have different expectations, wants and aims, it are eventually the political objectives which tend to become the measuring rod for quality. Thus, attempts to define quality precisely in education and training lead to political discussions and choices.

Thus, while an exact quality definition - which essentially comes down to specifying the criteria for the design of programmes ('quality of design') - is problematic in a VET environment, there are less problems with the notion of quality assurance: how to ensure that the quality specifications can be met. This is a process logic which is less subject to political debate, but has more to do with identifying the factors and operational characteristics which are most effective. As an example, the General Law of the Spanish Educational System (LOGSE), is quite explicit about quality - one of its sections exclusively deals with quality issues. One article of the law lists the factors - essentially process characteristics - which require particular attention from a quality perspective:

- the qualifications and training of teachers
- educational planning and programming
- control of education resources
- innovation and research in education
- education and career guidance
- inspection
- evaluation.

1.2.3 Applicability of industrial quality approaches

Whether or to what extent 'industrial' quality approaches are relevant to VET systems is a subject of debate in many countries. Few dispute that they are often appropriate in a CVT context. Indeed, the provider of training knows the customer - a characteristic shared with many services - which gives him various possibilities for identifying demands and expectations in view of quality planning and improvement. These possibilities include the direct questioning of the persons concerned, analyses of relevant training needs, systematic analysis of skills deficits, and benchmarking strategies. Customer satisfaction - the starting point of any industrial quality strategy - is also relevant and can be measured based on, e.g.:

- implementation of the scheme within the deadline
- comprehensiveness of the scheme
- absence of errors in the implementation of the scheme
- comprehensiveness of the contents
- understandability of the contents
- expert support in the conversion of the place of learning into the place of functioning
- consideration of proposals for change
- level of complaints.

And finally, the principles of quality assurance and improvement adopted in business can also be applied. Thus, a customer-oriented CVET provider who is capable of integrating customer expectations in the design of his courses, and who undertakes systematic assessments in view of improvements, can be expected to be successful on the market in the long run.

The application of industrial quality concepts in initial VET is more problematic, however. The ap-

plication of the 'customer satisfaction' dogma is not straightforward - moreover it is often not accepted as entirely valid by all stakeholders. This problem stems from the multiple functions of initial VET provision, which are not purely 'economic', but also geared towards the personal development objectives of the individuals. Despite these problems, it would appear that the necessity of quality standards for VET - on whatever assumptions these are based - and associated quality control procedures is generally recognized and supported by all the stakeholders involved, although not necessarily on the basis of identical arguments.

Thus, a summary of the European situation on this matters is that a generally agreed and operational model of quality in VET systems is lacking. The quality focus is still predominantly at the programme level, with emphasis on 'product quality' aspects (curriculum content) and 'input' factors (financial resources, teacher qualifications). Far less attention goes to 'output' factors (except failure rates) and 'process' characteristics (e.g. management, organisation, development, staff training).

1.3 The increased emphasis on quality in vocational training

1.3.1 Context: the increased quality focus in society

Since the education world has always been concerned with quality issues, it is legitimate to ask why traditional quality concepts and quality assurance mechanisms are now often considered less appropriate.

A partial answer can be found by considering that education and training systems are - increasingly - interwoven with the rest of society, and therefore subject to similar pressures and trends. Amongst the important trends in society that are driving education provision towards a service that must satisfy the 'clients' are:

- When it comes to quality, people increasingly ***reject*** the ***historically grown distinctions*** between products and services, between profit non-profit, public and private, small and large organisations. Education and other public services such as health care and public administration, have lost their special, somewhat protected status compared to other sectors. The broader choice and increased levels of product and service quality continuously raise citizens' expectations and make them extremely critical of low-quality performance anywhere.

- Another cause are ***changing value systems*** in society, including growing individualism, as well as increasing distrust and tension, between individuals, institutions and public authorities. In education, one of the concerns leading to distrust (hence need for control) is that teaching staff, unless controlled, will tend to represent more the vested interest of their disciplines, professions and employment situation, rather than the educational service delivered to students.

- Not only do citizens become more critical. The wider choice gives them more power and increases the appetite for ***change, flexibility and customising***. This is related to more complex and variable qualification requirements, as well as to people's less uniform ways of life and expectations.

- The ***information*** revolution. Once certain information enters the public domain, e.g. the results of an evaluation, citizens expect such information to be available in the future as well, and there will be requirements for more of the same. This also holds for the development of quality systems in education: the more initiatives are taken, the more there will be demand for them. This implies that institutions and even countries can eventually not avoid following those who have taken the lead.

- A specific trend which applies to public services (and thus to an important part of the VET system) is the issue of ***accountability*** and the constraints on public resources. Governments increasingly need to demonstrate that public money is effectively and efficiently used, and they want to apply this logic to all organisations that are supported through their funding.

All such trends lead to demands for more quality from whoever who provides products and services. Thus, the surge of the quality debate in education and training is first of all the logic consequence of changing expectations and attitudes in society.

1.3.2 The quality rationale in initial vocational education

In addition to these general societal trends with their slowly growing but persistent effect on VET systems, there are of course a number of factors

which are specific to the education and training sector itself. Many of the changes and trends in VET systems over the last decades (cf. 1.1.3 above) can be linked directly with quality concerns. In particular, for initial VET, one may state that the increased interest in quality is connected to changing views on what are effective ways of managing VET programmes by providers, and to the need to meet an increasingly variable training demand for a more heterogeneous population. Both factors are seen to crucial for higher training effectiveness.

The Danish situation illustrates the speed of change in this area. The focus of the quality policy of the Department of Vocational Education and Training of the Ministry of Education in 1989-91 was on structural reform of the overall VET steering, management and financing system. In the period 1991-95 there was a shift into experimentation through stimulus and financial support of a vast number of decentralized and very different school quality projects. And in 1995 a new, more systematic quality programme was announced.

In summary, the main factors which are at the heart of new quality strategies in initial VET - in addition to the societal trends mentioned above - are:

- The ***growing complexity*** of educational supply and demand. In the past quality in education and training could almost be attributed to the 'wisdom' of public authorities and the inherent abilities of the teachers and trainers. Because of the rapidly changing environment, new demands, more complex activities, differentiation, and increased customer involvement, these factors no longer are a guarantee for quality.

- ***Competition*** between VET providers is growing. This competition is based on facts and on the real quality of the VET delivery, and no longer on its historical standing and reputation.

- Many types of education and training are faced with an ***escalation of costs***. Merely increasing autonomy is no solution, if the VET provider has no clear idea on its purpose, its priorities, on how it will improve quality and on how it intends to develop in the future.

Such factors naturally call for better and more strategic management of VET providers. It requires the efforts, enthusiasm and commitment of everyone within the organisation - in other words, a 'total' quality management approach.

1.3.3 The quality rationale in continuing vocational education

The societal (cf. 1.3.1) and business trends are of course entirely applicable to most of the CVET provision, in particular those programmes available on the free market. The logic applies somewhat less in CVT aimed at upgrading low-skilled people or caring for the unemployed - where market forces are far less prominent.

But there are also a number of factors and trends which are specific to the CET sector. One of the main reasons for the increased attention to quality issues in continuing vocational education and training is the lack of transparency, caused by the large number of providers and programmes without apparent regulation. This creates a demand for systems and mechanisms which demonstrate the quality of what is on offer. Moreover, meeting this demand becomes more complicated because of the trend for customising and company-dependent design of training programmes.

In other words, the effects of the rapid and diversified expansion, over the last decades, of both CET providers and their training provision, is in itself at the origin of the growing call for quality assurance approaches. Implicit in this development is the recognition that market mechanisms, which normally lead to quality improvement and elimination of low quality provision, are not working optimally.

In addition to these general trends, specific considerations often apply at national or regional level. In Greece, for instance, the availability and use of considerable national and European funding for new CVT activities drove CVT structures and activities to a degree of expansion, multiplicity and diversity never shown before in Greece - which is at the origin of Greece' first national efforts to control and improve the quality of CVT. A similar development has been observed in relation to the integration of the former DDR regions within Germany, where the expansion of CVT activities quickly led to a demand for quality assurance mechanisms.

The demand for some mechanism for assuring the quality of training provision and improve market transparency not only comes from customers. In many countries, legislative initiatives by public authorities have been taken in order to protect the customer, in particular when it concerns individuals. A particular aim of such actions has been to offer customers a degree of security when they purchasing continuing training services.

The quality trends in CVET are also related to changing attitudes within firms, the main customers, themselves. Companies increasingly recognize the importance of continuing training of their employees as a critical factor for their long term market success. Consequently, optimising this investment through quality assurance mechanisms - both within the firm and with the providers - is becoming a necessity. Another business related driving force is the growing attitude for quality assurance for the firms' own products and services, e.g. by following one of the ISO 9000 standards. This reinforces the tendency to apply similar quality assurance principles for the training activities. It also explains the growing interest in certification of training providers under ISO 9000.

A final, but still modest development in most European countries, is the demand for accreditation of CET efforts by individuals. With an increasing number of individuals investing in updating and upgrading of their competences, the need for some form of recognition of these efforts is growing.

It is difficult to imagine how such demands could be met without some kind of formal recognition of the quality of the training they have followed - and thus implicitly of accreditation of providers and/or their training programmes.

Chapter 2 Quality assurance and control systems in vocational education and training

2.1 Quality assurance in vocational education and training

2.1.1 What does quality assurance mean?

The definition of '***quality assurance***' according to ISO 8402 is: "*All the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfil requirements for quality*". In other words, quality assurance requires to ensure that

- quality standards are defined
- suitable procedures are available
- these procedures are monitored for conformance
- causes of non-conformance are analysed
- causes of problems are eradicated through appropriate corrective action.

'Quality assurance' mechanisms can be considered as a subset of a '***quality control system***': they concern the processes which ensure conformity of output with specifications. The application of quality assurance principles requires, of course, some consensus about what are considered as the main quality attributes - which is, as we recall, not always straightforward in the provision of VET programmes.

Quality assurance grows in importance when moving from a product-oriented focus on quality - which is still predominant in European vocational education and training - to a process orientation of quality. It assumes an understanding of the various process which lead to a quality result, of the input- and output factors which should be controlled, and of the process factors on which control can be exerted. It can easily be understood that, given its complexity and set of interrelated processes, there is no easy or generally applicable method for quality assurance in vocational training.

For initial vocational eduction and training, quality assurance is already a daunting task, especially in the light of the changing requirements and demands. However, factors such as the established public concern for quality in education, the availability of agreed vocational programme standards, and the existence of inspection and control mechanisms, at least provide a solid basis for the introduction of new or additional quality assurance methods. However, a shift from 'product' to 'process' quality assurance in noticeable, given the increasing variety of vocational programmes (the product), which makes it less feasible and practical to define quality assurance mechanisms on a product by product basis.

In CVET, quality assurance is an even more complex affair. Only in certain areas, common quality standards exist - in general it concerns vocational programmes which are state funded and/or which are at the borderline between initial and continuing training. When considering less systematized training actions which are more closely following the market demands, process quality control becomes more heterogeneous and less systematic. The focus of quality assurance also shifts to ensuring that the provider's promises regarding course content and training outcomes are actually realised. For a training centre this requires to have a series of quality assurance mechanisms for its different training development and organisation processes. However, quality assurance is not easily achieved, because the nature of the training demand is very variable, courses have to be generated quickly, and training programmes have often a very short lifecycle.

A special feature of the quality assurance issue in CVET is that it applies to both the provider (as in initial VET provision) and the customer - the company investing in training. Thus, more systematic planning, control and review mechanisms are becoming implemented to verify that training followed by employees actually meets business, departmental and job performance requirements. This trend also illustrates the gradual change from a supply-led towards a demand-driven continuing training market. It should be noted that currently a wide variety of procedures and methods are subsumed under the header 'quality assurance' - reflecting the relative recent introduction of the concept. Another interesting observation is that some of the most effective quality assurance approaches in CVET are based on cooperation between firms and the external providers.

2.1.2 Implementation of quality assurance principles in European VET systems

In European VET systems, one observes two main types of approaches for ensuring the quality of initial and continuing training. One set of approaches is based on (legal) initiatives from public authorities, the other one is dependent on market strategies. While public strategies were initially reserved to initial VET, and CVET was faced with market forces only, a growing intermixing can be noted: public authorities are setting their mark on at least part of the continuing training sector, while market principles and approaches are entering the initial vocational education and training world.

Measures, approaches and instruments which are legally regulated or prescribed by ***public authorities*** include:

- recognition of the content and the certificates of vocational education and training programmes - notably those giving access to other programmes and positions in public services or regulated professions
- official standards for programmes and providers, in general referring to input-factors
- regulated access requirements of trainees
- inspection systems
- qualification requirements of trainers and teachers.

Such issues may be laid down in legislation at national or regional level, be formulated as criteria for funding, or specified as a requirement for delivering training to staff of public services. To the extent that these measures are coherent and complete, they will contribute to quality assurance.

Other quality assurance mechanisms are linked to ***free market*** developments, such as

- process-oriented quality assurance systems of providers, possibly certified under ISO 9001 or ISO 9002 (in the UK, Germany, increasingly in the Netherlands, Denmark and other countries)
- labelling of providers and programmes based on particular criteria or norms (e.g. in Germany, France, Ireland)
- internal quality assurance mechanisms within firms (in general the larger firms with separate training departments)
- the availability of databases on VET provision in view of improving market transparency (e.g. in the Netherlands, Germany, France, Belgium, Spain)
- customer protection criteria and ethical conduct of providers (e.g. Germany, Norway)
- quality assurance based on self-assessment methodologies (e.g. CEDEO-system in Netherlands).

The balance, extent and spread of all these public and market-based quality assurance mechanisms varies considerably across European countries. Let us give some examples.

In Greece, for those areas of CVT where there is some form of legislation, the main criteria for quality assurance appear to be

- the competence, expertise and qualifications of the trainers
- the adequacy of the identification of training needs, and the capacity in transforming the results of training needs analyses into relevant training plans and specifications
- the relevance of qualifications offered
- the effectiveness of the training in terms of achieving positive outcomes and performance improvements
- the usefulness and relevance of the training support materials and tools, as well as the suitability of the premises, equipment and environment for training
- the effectiveness of the organisation, procedures and training arrangements.

Depending on the type of activity, the dominant focus of the prescriptions varies from the relevance of the content, over training plans, to financial element. Overall, quality is assessed by its effectiveness in meeting the vocational employment needs of the participants, alongside its compatibility with the requirements of he labour market, and this at minimal cost.

In Germany, a considerable expansion has taken place in the development of vocational training schemes for people of new Länder. Alongside this development, a highly structured network of control measures for the quality assurance of continuing training schemes has evolved. Elements include the methods for developing vocational programmes, the obligation to advise the participant in the vocational training scheme, appraisals of the impact of the training on the labour market, and a stronger obligation for the bodies financing training measures to conduct evaluation. Also in this case, the economic efficiency and the cost-benefit ratio of the vocational training provision plays an important role. A particular feature of the schemes has been the in-depth evaluation and information gathering of the schemes. Regional and sectoral analyses have yielded data on the perceived quality and the changes over time, complemented by data on subsequent career paths.

In the Danish initial VET system, the social partners are structurally placed in a strong position to influence the design and achievement of quality objectives - and thus assure quality. At central level the sectorial Trade Committees have a strong impact on the content of individual programmes and on their continuous adaptation and renewal. They also approve the companies which have suitable training places for apprentices.

At the level of schools, the social partners pursue quality objectives through their statutory representation in school governing boards and in the advisory Local Training Committees attached to all vocational schools. Furthermore, quality in initial VET is reinforced by the fact that a tenure with a company is required to complete a course: the employer is likely to assess whether a potential trainee is able to complete the vocational course, and bring value for money, since the apprentice wage is part of the employment contract.

2.2 Quality control systems

2.2.1 What is a quality control system?

Although 'quality control system' and 'quality assurance system' are sometimes used interchangeably, in the context of this report, quality assurance is seen as part of a wider quality control system.

The term '***quality control system***' refers to a large number of aspects and their interconnections, which together ensure the quality control of a number of related processes. The key characteristics of a quality control system can be considered to be:

- design and planning are based on identified needs and requirements
- operation and implementations are in conformity with what was planned and designed
- effective mechanisms exist for assessment of outcomes
- there is continuous improvement of design and operation.

Such a quality control system might apply to a product, a service, a process, an organisation or even an industrial sector.

Quality control systems require a range of things to be in place and operational

- clear ownership and identified responsibilities of the system, its various components, stages and processes
- an understanding of needs, in particular when these needs are changing rapidly
- the availability of an efficient design and planning methodology for responding to identified needs
- the resource and competence capacity for effective implementation of what is planned, and production of the outcomes specified
- an understanding of the internal and external factors which may influence the process
- continuous assessment of what is being achieved
- identification and utilisation of process control factors
- availability of resources for the implementation of changes in the design and operation phases.

This list clearly shows that the concept of a 'quality control system' is applicable to vocational education and training. In fact, the concept can be applied in different ways and at different levels. One may consider of quality control system for VET provision at the level of countries or regions - which we will call the 'macro-level' - exemplified by the state-controlled initial VET systems. An other useful level for considering quality control is the institutional level.

Although quality control systems require a clear identification of who is in charge of what aspect of the system, it is not necessary that all processes are under the responsibility of the same body. For instance, when considering quality control at the institutional level, several of the assessment processes (and sometimes also the needs analyses and programme design) are undertaken by bodies which are external to the one which is at the heart of the quality control system under investigation.

2.2.2 Quality control systems at macro-level

At macro-level, most European countries could be considered to have ***one quality control system for initial VET provision***, which is, in general, fairly complete, i.e. it includes all the features of a quality control system as described above. However, in most countries, several of the feedback loops built-in the system are not working optimally.

When moving to the continuing vocational training sector, one must differentiate between different sub-systems. Only for a small part of them, e.g. state-funded or recognized qualifications, it is possible to speak of a 'quality control system'. For the CVET provision on the free market, the supreme controlling body is the market of supply and demand. As we have seen, however, one of the reasons for the increased attention to quality issues

in continuing training, is exactly the recognition that market mechanisms are not working optimally. As more quality assurance mechanisms are being applied and start interconnecting, we can see the contours of quality control systems for part of the CVET provision emerge.

What are criteria for a good quality control system at macro-level in vocational education and training? The answer given in the Netherlands to this question is that 'be good' means (1) be credible, and (2) motivate those concerned to participate. Minimal requirements to achieve this are:

- full coverage: the total provision of the (sub)-system must be part of the quality control arrangements
- assessment and evaluation must take place regularly
- transparency of the quality criteria, with clear agreements on procedures and quality indicators
- public, providing customers with information about the quality levels attained.

A system which meets these requirements already exists for higher vocational education in the Netherlands, and a similar one is being prepared for initial VET at secondary school level.

2.2.3 Quality control systems at institutional level

It is at the level of institutions (VET providers) that the notion of a quality control system is most easily applied. Here, we consider an institution with its VET provision as a small system on its own and analyse whether it can control the quality of its VET services. Clearly, if a provider applies quality assurance methods to the totality of its provision, and also on its own organisation, it will have a good quality control system.

There are several ways to achieve such an objective; the more sophisticated ones are based on adopting a ***Total Quality Management (TQM)*** approach within the organisation.

The 10 main characteristics of TQM are:

- a strong customer orientation
- continuous improvement of processes, products and services
- quality assurance of the existing processes
- prevention of quality problems (instead of detecting them) to minimise quality costs
- a process orientation to internal operations
- leadership by executive management
- quality is the responsibility of everybody in the organisation
- frequent use of team-work
- focus on facts and use of data
- systematic problem-solving through appropriate tools

As can be seen, quality assurance is only part of a TQM strategy, while quality control systems at institutional level can also be seen as sharing many characteristics with TQM principles.

All over Europe, the interest for such quality approaches is increasing in VET circles. This is related to the relative success of such strategies in industry, but also to the recognition that, in order to meet the increasing quality requirements, emphasis must shift from a product focus, over a process orientation to the quality of the organisation as a whole. This being said, it is often not obvious how and to what extent TQM approaches can be applied in VET institutions.

In addition to some early Flemish, Dutch, UK and Italian initiatives, the Danish experience needs particular mention. Many Danish VET colleges have started development projects with the aim of creating their own methods and tools for quality assurance and development. After the structural reforms of 1991 the Department of Vocational Education and Training of the Ministry of Education supported 70-80 such school-based quality projects containing a variety of aims. Individual colleges have started pursuing quality strategies which implement quality management systems used in private industry in modified forms, e.g. ISO-9000 certification (see Chapter 4) and TQM.

Thus, quality control systems at institutional level are being developed all across Europe, including, of course, with providers of CVET, since they need to meet the quality standards of their industrial customers, who increasingly themselves have quality control systems. On the other hand, one should recognize that quality control systems in VET provision will never function as good as in industry. After all, training and education are intangible services, with the customers themselves being partially responsible for the result. For that reason, quality control models are more likely to focus on production and detection, rather than on prevention.

2.3 Evaluation mechanisms as part of quality control systems

2.3.1 Evaluation models for vocational education and training

Evaluation is not a new issue in the education and training world. Many subjects might be evaluated in vocational education and training, such as:

- the students or trainees, typically through some form of examination
- the teachers and trainers
- the programme, curriculum or course
- the organisation and management.

For each of these subjects several aspects can be evaluated, e.g. for a course: its relevance, its delivery, and its impact. Although 'evaluation' activities can be considered as being merely a part of quality control systems, the fact is that evaluation in education and training takes place in several forms and for different purposes.

Evaluation may serve one or more objectives, of which the main categories are:

- legitimation: which relates to the justification of the design of vocational education and training
- insight: helping an institution or programme to understand its own functioning better (could happen through self-assessment or external assessment)
- policy support: evaluation as a means for improved decision-making at institutional or at political level
- improvement: this is the function which comes close to quality improvement and assurance
- transfer: using evaluations to improve practice elsewhere.

Thus, evaluations are in general used for any of three purposes:

- demonstrating relevance and accountability
- increasing the understanding of the current situation
- serving as a basis for improvement at several levels.

Some types of evaluation focus on one aspect only, e.g. the examination of pupils. Other types, such as an audit of a VET provider often contribute to all objectives and purposes, albeit to a different extent.

Considering the purpose of evaluation is one way of classifying types and forms of evaluation in VET systems. Other perspectives are linked to the categories of the objects of evaluation. Two useful classifications are one based on 'layers' in VET provision, and one based on the consideration of input-output model.

The first model distinguishes a number of ***layers*** in VET provision (see also Section 5.1)

- policy-makers and supporting administration
- VET provider
- VET programme
- teacher and trainer
- pupil, trainee, student

For each layer, a distinction can be made between 'quality of design' - e.g. adequacy of VET policy - and 'quality of conformance' - e.g. effectiveness of the providers procedures. This provides in total 10 areas for evaluation. A quality control system will need to include evaluation of all these areas if it wants to be fully effective.

Another way of looking at evaluation is to consider VET provision mainly as an ***input-output*** system. Evaluation subjects can than be grouped into input, process or output factors. ***Input*** evaluations assume that the provision of appropriate preconditions guarantees the quality of the output. Typical aspects to be evaluated include: teacher/trainer qualifications, programme description, definition of didactic and methodological approach, course syllabus, equipment and training environment, preliminary knowledge and motivation of trainees. Forms of input evaluation are found in most initial VET systems.

On the other hand, in CVET measures, ***output***-evaluation is more common. Such evaluation methods draw conclusions about the quality of a VET activity from its success, its impact or the satisfaction of the trainees: immediate result of the course, competences learned, course completion rates, productivity enhancement, etc. Typical methods for output evaluation are participant surveys, analysis of test results, self-assessment methods, evaluation of work performance improvement. A special case of output-evaluation is the examination of pupils/trainees, which is standard in initial VET, but not very frequent in CVET.

Finally, ***process***-oriented evaluation approaches can be applied by combining individual quality evaluation methods into a coherent system designed to evaluate and improve the VET delivery process as a whole, from analysis of training needs to application of competences learned. Additional factors for process evaluation include the planning and execution of activities, the management of the learning environment, the methods for delivery of training, the training of trainers, the non-educational services

delivered, and the management of training institutions. Process approaches are still under-developed but growing in importance.

If further classification of evaluation classes is needed, a combination of the layer-model and the input-output-model is possible.

2.3.2 Use of evaluation methods for quality control in provision of VET

When evaluation is part of a quality assurance or control system, it mainly serves two purposes:

- verification that requirements and quality criteria have been met (or to what extent)
- analysis of possible improvements which can be fed back into the quality system

These two functions, verification and improvement, can be observed throughout the range of evaluation measures applied in all types of VET provision. However, it is not because such evaluations exist that they are also effective for what they intend to do. Indeed, undertaking an evaluation is one thing, but making sure that it actually evaluates reliably what it intends to do - in particular quality aspects - is another matter. Let us illustrate this with some examples.

In Portugal, the evaluation of (publicly funded) continuing vocational training measures is compulsory, but is mainly undertaken from an administrative perspective, using indicators like resources (trainers, didactic resources), products (number of trainees), or of internal efficiency (cost/benefit ratios). No evaluation is conducted of the professional competence acquired by the trainees. There is also no assessment of the training approaches that best lead to the achievement of these qualifications.

Similar restrictive interpretations of the 'quality of VET provision' are also found in other countries, e.g. in Greece. An exception appears to be the evaluations conducted for new vocational training scheme in the new German Länder. Traditional quality evaluations (notably measuring satisfaction) have been complemented by data on subsequent career paths, which relates the quality of continuing training to the sub-sequent occupation.

A second issue worth mentioning is that of the reliability of evaluations themselves. Consider, for instance, the examination of pupils and trainees in view of their certificate. Sometimes, this systems is believed to be indicative of the quality of the education process. However, exams measure absolute performance, which is not the same as the quality assessment of the training measures. High quality VET activities require high quality examination systems. But it is well-known from educational research that the list of factors which pre-empt the use of a perfect examination system is very long: the candidate, the examiner, the subjects themselves, the situation, the candidate-examiner interaction, the representativeness of the questions, the coordination between the examiners, the basic references for the assessment, the theory-practice relationship, etc.

In CVET evaluations as well, reliability problems can easily be detected. For instance, the use of simple assessment surveys, which are to be filled in by trainees after a course, is a widespread practice with CVET activities. Such surveys measure instant satisfaction, which is useful to know. However, the results ae not necessarily a good and reliable indicator of the quality of the programme, which should be linked to the impact on the work place.

Another area for concern is the growing practice of self-assessment of providers on the basis of published criteria, checklists and models. Although it must be recognised that an honest self-assessment process can yield very valuable information, there are always several sources of errors which slip into the application of the method and affect the reliability of the survey instrument and the result it provides.

2.3.3 Quality indicators

One can define 'quality indicators' as formally recognized figures or ratios which are used as yardsticks to judge and assess quality performance. Quality indicators are discussed briefly at this stage, since in general they are the result of some kind of evaluation and analysis, and at the same time they often serve as a reference framework for evaluation.

There is a growing recognition of the importance of such indicators, in particular in publicly-funded education. The INES-project of the OECD, which establishes international comparable education indicators, is fully supported by many European countries. At present, these indicators concern predominantly financial and macro-economic aspects, but there is a move towards more qualitative and institution based indicators which are more interesting from a quality point of view. Specific indicators which look at aspects which are very specific for

vocational training - e.g. relevance of programmes, impact on the work-place, balance of vocational/general subjects - are lacking however.

The growing interest in quality assurance and TQM approaches appears to be a driving factor for the establishment of quality indicators. Indeed, one of the 'dogmas' of the TQM philosophy is that decisions should be based as much as possible on facts. The application of this principle not only leads to a requirement to gather data in a more systematic way (which is then used for quality assurance and quality improvement), but also to develop a number of overall indicators which (1) are simple to understand, (2) reflect or are strongly correlated to the quality of critical processes, and (3) can be used for trend-analysis and comparative purposes.

Undoubtedly, both the international OECD work and the implications of the quality movement are likely to lead to the use and adoption of quality indicators in VET provision. Surprisingly, however, in the countries for which national reports were made, there are very few 'recognized' quality indicators for any part of the vocational education and training system. Of course, data is gathered in various ways, key figures are available, performance is compared, etc. In Spain, for instance, it is common practice to note the opinion of trainees on the different elements of the activity (degree of satisfaction, assessment of the teacher, etc.) and the accomplishment of the pedagogic objectives. There are also indicators for tangible results such as the relation between the training and the percentage of students who enter the vocational world or improve their work situation.

However, if exception is made of some of the OECD-indicators - which are not widely known and do not apply to CVET - no 'accepted' set of quality indicators seem to exist or be used systematically in the countries concerned, neither at macro-level nor at institutional level (in a country not covered by the reports, the UK, the targets for national vocational qualifications may be considered to be based on a macro-economic indicator).

Fortunately, the situation seems to be moving. For instance, in the Danish quality strategy plan, over 20 areas are listed which contribute to the quality of the school, ranging from strategic management issues, over student guidance to educational innovation. For each of these, both objectives and indicators to measure quality levels are bing developed.

Another example is a pilot project in a Portuguese school which is working towards the definition of quality indicators such as: adequacy of human resources, quality of material resources, management and organisation of the training, evaluation, level of trainee satisfaction, trainee adaptability to the employment post, possibilities of acquiring local apprenticeship, and possibilities of acquiring employment.

Chapter 3 Quality systems in European vocational training

3.1 Quality systems for initial vocational education and training

3.1.1 Traditional methods and approaches for quality

The ***traditional or classical methods for quality control*** in Europe's initial VET systems display many similarities across countries, with the following 'typical' characteristics:

- a centralized approach to the organisation of the education system
- a comprehensive legislation with detailed prescriptions regarding content and organisation of course programmes - including centrally defined curricula
- specific requirements for the qualifications and competences of teachers and trainers
- clear specifications regarding examinations of pupils/trainees (sometimes with identical examinations across te country), which is traditionally seen to provide the main quality guarantee
- in some countries, a highly developed inspectorate with access to all schools, with the explicit task of verifying conformity with the centrally defined curricula, and the respect of a range of rules imposed by the public authorities.

On the other hand, there are also important for certain aspects of the quality control system. The main differences would appear to be:

- the freedom of schools with regard to programme content and examinations
- the extent of control by the inspectorate
- the role played by the social partners, not only in terms of inputs to the curriculum design, but also in the training component, the examinations and the delivery of the final certificate.

The traditional ***predominant quality paradigms*** in initial VET have been (and still are, to a large extent):

- quality from a didactic and/or pedagogical point of view - with pre-occupations such as: how can learning be approved; how do we educate young people to become responsible citizens; what competences are needed for professional life?
- quality from a (macro-)economic point of view - with focus on questions such as: are the resources spent on VET efficiently used; what is the cost/benefit ratio of different forms of training; what are optimal class sizes; do new approaches (distance learning, multimedia, ...) bring value for money?
- quality from a social or sociological point of view - with concern for equality of opportunity, integration of less-favoured groups, no discrimination on access.

Obviously, these traditional quality approaches in initial VET are still valuable today, in particular when the mechanisms set in place are regularly assessed and updated. This explains to some extent why, unlike in other countries, the German Dual System is not undergoing major changes now. In this system, initial VET is provided both in a company (the predominant place) and a school (for complementary subjects). The training is aimed at a broad-based initial vocational training, in the course of which the technical skills and know-how required for a qualified occupational activity are taught. For every skilled occupation a training regulation is drawn up jointly by the State organisations and the Social Partners. This specification is permanently updated, mainly at the initiative of the social partners. Thus, a main factor which contributes to maintaining the quality of initial VET is the permanent adaptation of the training regulations for companies and the outline curricula drawn up at Länder level for the vocational schools.

The developments in Spain, which seem to be inspired to a large extent by the German situation, can be placed in this context of 'traditional' approaches to quality in initial VET. The new legislation also pays much attention to those traditional factors, such as the quality of the teaching staff, the curricula, the role of the inspectorate, and the system of evaluation. A particular feature for quality assurance has been the creation in 1993 of the National Institute of Quality and Evaluation, which main purpose is the continuous evaluation of the Spanish educational system, and, as a result, of the vocational education and training. Furthermore, in some autonomous communities which have education responsibilities, evaluation and quality institutes are being created.

In Denmark, the long established tripartite structure of Danish VET, with a strong social partner influence on the input-, process-, and output-side of the system, is seen to imply that quality control mecha-

nisms are more or less built-in in the system - at least in relation to curricula and effectiveness of programmes. From such a perspective, whereby end-users are much integrated in the formulation of standards, the running of production and the testing of performance, there is less need to move into new quality paradigms.

3.1.2 Current status with regard to components of quality control systems

It has already been mentioned that in most European countries the concept of a 'quality control system' is applicable to the initial VET system considered at the macro-level:

- the 'design' phase corresponds with the centrally agreed 'learning targets' or 'curricula specifications'
- the 'implementation' stage with the delivery of the curriculum by the schools
- the 'assessment' phase with the activities of the inspectorate and/or other evaluation mechanisms
- and finally the 'improvement' process with the follow-up of recommendations.

An analysis of the different components of this 'quality control system' in European VET structures indicates that one or more of these stages may not function optimally, although efforts for improvement are noted for all stages.

If we consider first the ***design phase***, a critical observation is that in some countries (e.g. Belgium) the social partners are not really involved in the design of the vocational curricula (or of the training specifications); in other countries their possibilities are restricted. This, of course, makes it more difficult to design appropriate programmes which will meet fully the needs of the employers.

More general, however, the importance of the design phase is increasingly recognised. The recent changes in the Spanish legislation reflect this attitude. Quality control elements which now appear in the design phases of specific vocational training include the following steps:

- conduct of sectoral studies, for a better understanding of the occupational and training needs of different industrial sectors
- preparation of vocational profiles based on the analysis of information gathered
- definition of terminal objectives and evaluation criteria: the vocational competence to be reached in schools defined by the prepared vocational profile.

The new law on Adult and Vocational Education in the Netherlands gives considerable attention to the design issue, in particular by specifying the development and maintenance of a comprehensive structure of qualifications and the corresponding vocational programmes. The steps involved are similar to the new Spanish and traditional German system.

Less attention appears to be paid in the current changes to the ***implementation phase*** of the quality control system. No doubt, this is because this is the stage which needs to undergo least change and where traditional quality assurance mechanisms are often sufficient. One issue of concern here is the large autonomy of teaching staff once they are appointed, which may not facilitate the control aspect.

The ***assessment part*** of the quality control system includes a number of traditional evaluation mechanisms in most countries; most importantly, the examination of trainees/pupils, and the verifications by an inspectorate or similar body. However, this may be insufficient: examination systems cannot be seen as absolute guarantees of the quality of education, and the inspectorate is often not fully resourced to evaluate all aspects.

Other assessment mechanisms found in several countries concern the regular evaluation of the design phase, i.e. the verification that the principles on which the design was based are still valid, and that the design meets the vocational profiles' requirements. Also, for example, the new Dutch law requires that all vocational schools have, from January 1996, a plan for self-assessment and quality management to cover all aspects of their operation.

A major weakness in many of the quality control systems is how assessment of processes and outputs is fed back into the system to lead to ***lasting improvement***. Although improvements are noted, the feedback loops (e.g. implementation of recommendations following assessments) do often not function properly. In other words, too much attention is paid to assessment and evaluation, in comparison with improvements. The improvement process is made more difficult by the lack of indicators and targets which could be used as measurable objectives to be reached.

3.1.3 Quality concerns at macro- and institutional level

The analysis of current developments suggests that the idea of a 'central' quality control system is becoming less appropriate. Changes in the external

environment require from vocational education institutes to adapt faster than before. This also implies that 'central' quality control systems are gradually loosing in importance in favour of the quality control mechanisms at the level of the schools. 'Design' aspects are already moving gradually to schools, 'implementation' covers an increasing range of services, 'assessment' and observations come from a variety of groups (inspection, pupils, parents, industry, other schools), and 'improvement' may result from many different types of inputs. There is more need to consider internal processes, in order to ensure that they generate the outcomes which they are supposed to produce.

Thus, the concept of 'quality control of initial VET systems' becomes less attributable to the control and direct measures applied by public authorities, but starts to emerge as the aggregate sum of the quality control mechanisms within schools and training providers. This explains the growing importance of TQM and related management approaches. Important changes in this direction, supported by recent or anticipated legislation are currently taking place in e.g. the Netherlands, Denmark and the UK.

For instance, the new (30 August 1995) Danish quality strategy programme of the Ministry of Education (Department of Vocational Education and Training - ESA) contains several fundamental elements of which the combination will give a strong impetus to improvement of the quality control system (some elements exist or are being developed):

- The staring point is the vocational schools' continuous, internal search for quality development and self-evaluation of their activities, based on systematized methods and tools, including surveys of examination results of students, evaluation reports from (external) examiners, surveys of user satisfaction, etc.
- The availability of educational statistics, including balance sheets, statistics on recruitment and completion rates, the LOP (apprenticeship contracts) and career-statistics, etc., integrated into a management information system.
- The development and use of supplementary quality criteria/indicators and other quality tools, which are specific to the different types of provision with their specific aims, objectives and target groups.
- Supervisory visits and guidance by the ESA, the Department of Vocational Education and Training, at the vocational colleges.
- Analyses of accounts, auditing, and cost-benefit ratio.
- Experimental education, pilot projects and innovation/development work.
- Analyses and forecasting, including occasional surveys of specific educational areas as well as evaluation of systems.

As can be seen, these measures relate to both the macro-level and institution-level quality control systems. It should be mentioned that the official Danish view is that the individual vocational college must be free to choose its own concept of quality and its own quality indicators, based on the values and culture of each school. As a result of this philosophy, the concept of quality will be defined differently from school to school.

The new Portuguese arrangements provide a mix of traditional and new quality approaches. The principles on which underpin the initial VET provisions include:

- moving away from narrow vocational training which is only technical, reproductive and specialised *(pedagogical and didactic view on quality)*
- promoting alternation between schools and work learning *(didactic, customer and economic quality perspective)*
- combatting social exclusion and promoting equal opportunity *(quality from a social viewpoint)*
- developing the participation of non-traditional intervening parties, in terms of the organisation and development of training *(quality from a customer point of view)*
- growing decentralisation, with incentives to the development of autonomous projects directed at specific groups *(management view on quality)*
- introducing flexibility in the organisation, direction and characteristics of training, following the interests and needs of the different partners involved *(management view on quality)*

In the new Spanish arrangements, there is also an increased focus on the responsibility of the school, with special attention for controlling the quality of teaching and learning and specific units being set up for guidance, coordination of course programmes, curriculum development, and tutoring.

Before closing this section, two points merit attention. The first is that the debate over quality in education and training sometimes overlooks that schools or other VET providers provide a range of ***non-educational functions and services***, such as:

- guidance services (further studies, placement services, first employment)
- consultancy, advice

- development of values and attitudes (moral values, citizenship, social behaviour)
- personal and cultural development of young people
- pupil/student support services
- administrative, technical and logistic services
- recreational services (sports, gatherings)

Most of these services are considered very important by users and contribute fully to their quality perception of the provider.

One can already observe the trend whereby the quality of these services becomes the main differentiating factor between VET providers. This is not because the quality of the VET provision itself loses in importance, but high quality levels on content and delivery are increasingly 'taken as granted' by customers (or they are not in a position to assess quality differences), and therefore the quality of the other services grows in importance.

A second final point to note is an interesting development in Denmark, whereby higher quality gives right to higher autonomy. Under a particular Danish scheme, public institutions are allowed "to opt out" of the normal control arrangements and sign a contract giving more freedom, but also requiring more efficiency and quality on a quid-pro-quo basis. In that context the Ministry of Education signed contracts with two colleges in Aarhus requiring a systematic measurement of a number of quality parameters: the school's reputation, the satisfaction of customers, clients and users, and performance. It has already become clear that even 'soft' quality factors such as user satisfaction can be measured, and that the results can be used by the schools to improve specific quality aspects.

In summary, more recent quality perspectives such as quality from a customer perspective and quality from a management point of view are increasingly finding their way in initial VET provision, mirroring trends in the private sector. The value of these newer quality perspectives is increasingly recognised, particular at grass-roots level, but also at policy level - although the differences across countries are still considerable. It would also appear that vocational schools, because they are fairly close to professional life, have been more open to new quality trends than general secondary schools.

3.2 Quality systems and models in continuing vocational education and training

3.2.1 Differences with initial VET from a quality assurance point of view

The quality approaches in continuing vocational education and training, both traditional and newer ones, often differ substantially from those found in initial VET. The huge numbers and types of CVET providers each offer a number of training measures which may considerably differ in terms of content, level, length, purpose and cost. Moreover, this sector is very dynamic, with new providers emerging every week, old ones disappearing, and courses having a short life-cycle - many even being organised only once and for a very specific target group. At the origin of this evolving situation are market mechanisms of supply and demand. Therefore, it is not surprising that few of the quality control mechanisms employed in initial VET are applicable, even for CVET funded directly or indirectly by public authorities.

Although most countries have regulated part of the CVET market through partial or complete funding of certain types of programmes (notably training for the unemployed, second-chance education, upgrading and re-training facilities), sometimes through formal recognition of some of the qualifications, in no European country there is an overall, comprehensive system of continuing vocational qualifications and certificates. But there are some moves which go at least some way in this direction, e.g. in the Netherlands.

Obviously, this lack of a tradition of an overall regulating mechanism for the CVET sector, is a first reason why quality assurance and control methods are a relatively new issue in CVET. Another important reason is the high variability and custom-based nature of the programmes, which makes it even less obvious to apply standardised quality criteria, other than the most trivial ones.

A third important difference with initial VET - but one which can be considered as an advantage from the perspective of quality improvement - is that a considerable part of the CVET sector is subject to the laws of supply and demand. This implies that, for competitive reasons, providers will need to ensure and improve the quality of their provision, and therefore seek to develop specific quality assurance mechanisms. If they are successful, they will have

developed quality control systems which are suited to their needs, are effective from the customer point of view, and economically efficient for themselves. Thus, market push and full autonomy may lead to specific quality assurance models. In reality, however, these mechanisms do often not work properly.

A final important difference concerns the fact that quality assurance and quality control is not purely an issue for the CVET supplier, but that also the customer is involved. This is obvious when training is developed and delivered complete inside a company, but it also applies when a firm hires external suppliers: the adequacy of the internal training policy, the way the training is prepared, monitored and applied, the assessment: it all contributes to the effectiveness of the training and thus its quality.

Let it also be mentioned that there are new trends emerging which complicate the adoption of quality approaches (which will not be developed in this report)

- the growing interest, by trainees, of some form of official accreditation or recognition of the training efforts they have undertaken - which would require a comprehensive qualification structure with accumulable credits)
- the need to integrate training of employees in a wider business development strategy - this requires from CVET providers to have a combination of a broad range of training and consultancy skills, which few providers have
- the move from organised training towards continuous learning in firms (the 'learning organisation').

3.2.2 Quality assurance and control systems for continuing vocational training

Different mechanisms for quality assurance exist, some of which operate in combination with each other:

- market mechanisms as such: competition between providers leads to better quality
- respect of contractual specifications, normally between suppliers and customers, but sometimes also collective agreements between social partners
- initiatives to improve market mechanisms: e.g. information and advisory facilities for customers of CVET, CVET databases, establishment of checklists
- voluntary self-assessment by training providers or in-house training departments based on quality criteria (e.g. in the Netherlands), quality label requirements (e.g. in Germany), or quality norms (e.g. in France)
- auditing and certification of CVET providers by an independent organisation, e.g. on the basis of ISO 9000 standards
- awarding licenses to trainers for delivering specialised types of training (e.g. software, management tools)
- public or private certification or recognition of certain programmes (based on respect of certain criteria)
- respect of multi-provider standards: e.g. requirements in particular sectors, criteria of fixed vocational profiles, meeting of national/European formal or de facto standards
- direct and indirect public support (regional/national/European) to new initiatives and programmes, the funding being conditioned by the fulfilment of particular quality criteria
- direct intervention from the state by setting minimal standards and/or issuing legislation for customer protection (e.g in the field of private correspondence education).

One may observe that the majority of these mechanisms operate at the institutional, rather than at the macro-level (in contrast with initial VET structures). Indeed, training firms operating on the free market need some form of internal quality control in order to remain competitive. Large public providers have also such mechanisms. One aspect which is common to the large majority of quality control mechanisms is the measurement of customer satisfaction just after a course, in general by using a simple questionnaire. On the other hand, continuing vocational training providers differ considerably in their capacity to master other aspects of a quality control system, such as assessing training needs, designing appropriate courses and implementing feedback.

The multitude of quality arrangements available reflect the variety of the CVET provision. They also suggest that market mechanisms often don't suffice for improving quality, mainly because:

- the different types of public intervention (including the presence of public CVET providers) distort market mechanisms
- the success of any training measures depends highly on the contribution and commitment of the customer
- the lack of transparency in the provision of CVET

- incapacity of trainees (and their employers) to asses immediately the added-value of training - and thus provide adequate feedback to the provider

This lack of well-functioning of market mechanisms has essentially led to three types of developments:

- a considerable variety of different quality assurance mechanisms - as illustrated by the list given - often of a voluntary nature, initiated by CVET providers or representative bodies
- reconsideration of training policies within firms with more attention to the effectiveness and cost/benefit ratio of the training undertaken (on which this report will not return)
- growing involvement of public authorities and institut, through direct and indirect measures.

Especially in countries where the rapid expansion of the CVET sector is a fairly recent phenomenon, the state appears to play a greater role, with attempts which go in the direction of quality control systems - at least for part of the sector. In Greece, for instance, public efforts predominantly consist of active participation on the market and the establishment of quality standards and quality assurance systems for training which are part of a legal or administrative framework. Two examples of initiatives introduced by the Ministry of Labour, with the active involvement of the Social Partners are:

- the National Certification Centre of CVT Structures, of which the main duties include the development of standards and the establishment of control procedures for certification of CVT providers structures, the validation of the programmes offered, and the approval of the trainers concerned
- the development and application of a legal, integrated system of norms and procedures for ensuring a minimal level of quality and effectiveness of the CVT activities which are intended for specific target groups, co-financed by the State and EU funds, and developed by public or private agencies.

Also in Greece, the establishment of OEEK (the VET Organisation) in 1992 has been of fundamental importance for the development of the VET system, in particular given its role in assessment and evaluation of VET provision. The OEEK has developed a series of specifications, standards, regulations and guidelines concerning the material and functional standing of the training structures under their supervision. Several activities planned and developed by OEEK have already begun to influence the context and orientation of the current debate on the quality of vocational training and it is expected that they will shape many of the future national efforts on in this area. It must also be recognized that in Greece the main driving force for many quality assurance initiatives has been the public accountability and the financial management transparency.

In other countries as well, one observes that certain organisations - not necessarily public ones - are taking a leading role in the quality debate. In the Netherlands, for instance, CEDEO has developed two systems:

- a quality assessment system for CVET providers, based on EFQM model, which can be used both for self-assessment by training providers, and for auditing by external evaluators (with funding by the Ministry of Economic Affairs)
- an older, but somewhat simpler, audit and recognition system: which is based on (1) a self-assessment report, (2) verification by external auditors, (3) an analysis of references (previous customers of the providers).

In Belgium the largest 'public' continuing vocational education provider, the VDAB, has been developing a number of internal quality control mechanisms, for both their own training and the courses sub-contracted to external providers. It is expected that such specifications will have some influence on the quality assurance mechanisms of the external training providers which are hired by the VDAB.

Also, in many countries the training departments of larger firms are also increasingly subject to scrutiny and quality control. The German firm Siemens has developed a set of quality criteria for training (including a label system) which applies to both internal and external providers. This is just one example of how several major training providers have developed their own quality indicators and performance criteria as part of a quality assurance system.

A word also on the growing interest in certification of CVET providers under ISO 9001 or ISO 9002. Although this is still a marginal phenomenon on the market, there are indications in several countries (in particular in the UK, Germany and in the Netherlands) that within a few years such a certificate will become a necessity for major training providers. This is likely to give a boost to the adoption of quality assurance approaches by other CVET organisations as well. Although some dispute the appropriateness of such a certificate for the training sector (the standards were originally intended for

the manufacturing industry), others see it also as an excellent way to avoid state control in the future.

To conclude, the situation described in the Greek report seems applicable to many countries - although the role of the state may be less pronounced elsewhere. The report argues that, in the strict sense, there is no formal operational system for the quality control of CVET beyond some legal and administrative requirements. Nevertheless, often one finds two distinct clusters of activities which can be considered as essential parts of an (incomplete) quality control system:

- the first cluster of quality assurance measures is based on the development and application of specifications, norms, standards, regulations and guidelines for the most essential training development and delivery aspects
- the second cluster of measures is based on systematic evaluations of the training activities or their selected operational components; the data for these evaluations are gathered through surveys with suitable questionnaires addressed to trainees, trainers, training managers, employers, company managers and occasionally to the social partners.

Thus, there is a growing recognition of the importance of quality approaches in the CVET area. However, developments are taking place at varying pace and in an unstructured manner, because the market is fragmented, and in many countries there are no organisations willing or capable of taking the lead.

Chapter 4 Vocational training quality issues in Europe

This chapter discusses briefly a selected number of issues concerning quality in vocational education and training. The text mainly sets out the different aspects concerned, as they have emerged over the last years. Since this is a European report, it also implies that the importance of the topics and the way they are perceived in different European countries is likely to vary. The issues covered are:

- *the changing role of public authorities and social partners*
- *reconciliation of decentralisation with central quality standards*
- *quality approaches as a means of raising the status of vocational education and training*
- *the contribution of quality systems to market transparency*
- *the availability of tools to support the adoption of quality approaches*
- *the relevance and added value of industrial quality practices (ISO 9000 and TQM) to vocational education and training*
- *European cooperation and the European dimension of the quality debate.*

Other issues of importance can be found in Section 5.2 "Recommendations for further research".

4.1 The changing role of public authorities and social partners

4.1.1 Initial vocational education and training

It has been illustrated in the previous chapters that a considerable variety can be found throughout Europe regarding the type and forms of involvement of public authorities in the quality control mechanisms for both initial and continuing vocational training. In initial VET, which is mainly or often exclusively publicly funded, the role of the state is in general quite strong, except in those countries (e.g. Germany and Denmark) where the social partners have also an important contribution to the management of the system, and hence are jointly responsible for quality.

Despite the predominant position of the state, its responsibility for both the design and assessment stages - two crucial stages from a quality perspective - has started to change across Europe. Although it remains difficult to generalize across many countries with their different forms of initial VET provision, there are a number of trends which influence the design of programmes and the nature of quality assessment.

Overall, the pace of change in education and training is increasing. Quality concerns are moving from conformance to input specifications towards meeting output requirements. The growing complexity of the education and training demand in society implies that programmes will increasingly need to differ in approach, be customer-based and have a more reduced lifespan than before. The capability for rapid and efficient design and implementation, and for project management becomes more important. Institutions are expected to be more accountable on how well they are performing; quality has to be demonstrated and can no longer be simply extrapolated from the quality image of the past.

In this changing environment, both design and assessment methods need to be reviewed as well, although many traditional approaches retain their value. The trend for diversification of approaches and content pulls assessment away from detailed programme content analysis towards evaluation of an education or training provider's availability of adequate procedures for design, the ability to monitor standards of delivery and the capacity to adapt course programmes in line with changing demands or expectations. It is obvious that such trends also impact on the state's traditional role in ensuring the quality of provision: the methods used for inspection, the nature of quality assessments and the contribution to the initial design of vocational programmes are likely to change. Many countries have a strong tradition of school inspectorate of which the role is being reconsidered. In as far as the evolutions in some countries can be considered as setting the tone for the rest of Europe, it implies a reduced role of public authorities, which becomes mainly involved in specifying the framework, in favour of increased input from social partners, and above all, higher autonomy of initial VET providers.

The participation of social partners and their contribution to quality issues may take place at both macro- and institutional level. In principle, this should lead to a higher quality of provision, if one accepts the idea that the bottom line for quality is customer satisfaction, since the customers themselves have a voice in the programme design, deliv-

ery and assessment. More important, maybe, is that there is empirical evidence that if initial vocational education is established in close cooperation with industry, it has an inherent capacity to adapt to changing market situations.

4.1.2 Continuing vocational education and training

There are great differences between European countries in relation to the organisation of continuing VET, including the associated quality control mechanisms and the role of public authorities therein. It was highlighted before that state intervention may concern the regulation of the market (to some extent), ensuring minimal standards (in particular for publicly funded VET), or guaranteeing the validity of certain qualifications. In some countries, such inputs are virtually absent, with market forces supposed to be the regulating mechanism; in other cases, the public participation is observable through a range of mechanisms. With changing demands emerging, many countries have started reconsidering the role of public authorities as regards quality issues in VET provision.

As a general rule, the involvement of the public sector in the continuing vocational training sector has increased over the last decades in most European countries. The most visible area where this has occurred is training for the unemployed or adults seeking to upgrade their qualification levels. However, the relative impact on the overall training market has been declining, because of the emergence of a private training sector which is mainly governed by the market laws of supply and demand.

In the 'private' CVET sector, there has been very little regulation so far, at least from the public authorities side. Traditionally, continuing vocational training is not considered as a part of the education system - which is to some extent reflected in the fact that most public support for such training does not come from the education ministry, but from other departments (employment and social affairs). The variety and number of training providers - a rough estimate for the European Union is about 80 000 organisations, most of which are very small - is also reflected in the variety of approaches to quality.

There appear to be two main tendencies towards quality control. The first is driven by the customers themselves, who are increasingly concerned by the lack of market transparency and seek the assurance of some kind of proof of adherence to quality standards. Movements like the award of quality labels (e.g. in Germany), independent audits (e.g. in the Netherlands), voluntary adherence to quality norms (e.g. in France) and ISO 9000 certification fall under this category. Some larger companies also impose their own training quality criteria to their training providers.

The second trend is whereby governmental bodies set minimal criteria and/or publish quality standards. These standards might be compulsory (e.g. when it concerns publicly-funded training) or meant as guideline. The developments in Greece illustrate the first case. The introduction of minimal norms by some state agencies - such as regulations for training plans, norms for costs, qualitative standards for the design and practice of training offers, specifications and guidelines for the evaluations - is considered as a major step forward for quality in CVET, since such kind of nationwide efforts occurred for the first time in the country. Moreover, they have started a movement whereby other Greek state-controlled agencies and private training departments of large companies have started to adopt and apply similar quality control and assurance measures. In Ireland, a specific 'Quality Mark' system has been introduced by the training and employment agency in view of setting quality standards for training in firms.

The role of public authorities may not be limited to creating a legal framework, be involved in standards and/or assessment of quality of CVET. Other types of contribution could be:

- Developing attitudes towards quality. For quality management approaches to be effective it is also necessary that the people concerned develop a quality attitude and understand their role in the generation of quality. Public authorities could be instrumental in this regard.
- Accreditation of programmes and students. With the growth of the CVET market - which in general is not regarded as part of the education system - the need increases to recognise the qualifications obtained by individuals through training and learning. Again, the state could facilitate these developments by contributing to the emergence of a comprehensive but flexible system of vocational qualifications and credits.

As it emerges, there are, as yet, no clear answers on what role public authorities could and should be doing in relation to quality in CVET. In any event, it will become increasingly difficult for public authorities to respond to questions which were once

simple to answer, such as:

- what role of the state in the design of VET programmes and associated qualifications?
- on what basis should the competence of organisations and individuals to deliver certain types of VET be assessed?
- how may one identify the programmes and courses that should be publicly funded and those that are not, and how should this relate to a national qualification structure?
- which VET aspects should be central in design and assessment standards?
- when and why should quality assessment be undertaken by public authorities?
- how, to what extent, and how direct, should quality assessment be linked to funding mechanisms?
- under what conditions should learning achievements, credits and course modules of individuals (including those obtained through self-study and private training providers) be assessed and certified on an equitable basis compared to degrees obtained through traditional routes?
- what support role should be provided by public authorities for successful quality assessment?

4.2 Reconciliation of decentralisation with central quality standards

The legitimate concern for ensuring quality has led many public authorities - and even independent organisations - to define minimum quality criteria for VET provision. The definition of such standards is not straightforward. When the standards are phrased in general terms, they cannot be easily used as criteria for quality assessment or made enforceable; they may also bring about problems of interpretation. When quality standards for training are made more specific, two potential problems may arise:

- national standards may not be able to cope with locally varying circumstances
- central standards may be too specific to deal with different types of training and learning.

There is thus an inherent contradiction underlying the establishment of specific quality standards and quality assurance procedures which are supposed to be functional and effective in any type and form of training activity. Indeed, on the one hand one may expect training quality standards and assurance procedures to be uniform and independent from any specific type of training, but on the other hand they have to be applicable and adaptable to a wide variety of training situations. In addition, an important trend observed in relation to (publicly funded) VET provision, is a growing decentralisation of the state apparatus to let VET providers react flexibly to local demands and circumstances. Again, this may be in conflict with the call for the establishment and enforcement of central or national quality standards, as a means of ensuring certain quality levels.

The importance of this conflict - between need for growing decentralisation and customising, and the existence or need for central, fixed quality standards - varies by type of VET provision. The different concepts of quality assurance found in different countries for different types of VET reflect the pluralism arising from the basic regulatory positions of the market and public institutions. Depending on the supply structures and their objectives, there are different conceptions of quality and quality assurance - and thus of need and added value of central quality standards. Formalisation in the form of bureaucratisation will compete with flexibility and customer orientation. This means that every form of regulation will have to try and bring out a balance between market-oriented and legislative positions.

Thus, it becomes clear that more thought should be given to both content and formulation of quality standards for VET, so as to make them as specific but also as widely applicable as possible. One approach, which is can be used for nationally recognized qualifications, is to focus on the basic objectives of the course, but leave it to the providers to determine autonomously how to reach these objectives. For other types of training, such an approach may, however, not be suitable.

4.3 Quality approaches as a means of raising the status of vocational training

A problem which is often overlooked when discussing VET issues, is the low social status and reputation of initial VET provision. In many countries, initial vocational education suffers from a low image; sometimes it is even regarded as a kind of second-class education for those unable to attend general education. Young people and their parents associate nowadays prestige and supposedly professional success with general education, finalised with a higher education degree. Vocational education receives less attention, less resources and is regarded by pupils and parents as a second-class

option. Young people often have no other choice than between general education schools for the better and vocational schools for the rest. Until recently, initial VET provision received little attention of governments in many European countries - although things have now started to change.

The low status of vocational training is sometimes linked with jobs in (manufacturing) industry and more generally, all kind of blue-collar work, being regarded as inferior. All of this results in a vicious circle in which education with low social status attracts teachers with low motivation and few good students, who are subsequently insufficiently qualified and thus confirm the image of second-class education and low social status.

Indeed, from a course programme perspective, it is easier to respond to customer requirements in vocational education than in general education, because the target group (the customer) is better known and often involved in the programme, in particular in countries with a strong tradition of participation of social partners in VET design, delivery and assessment. Thus, achieving quality can, in principle, be better defined in vocational education. A second advantage, from a quality point of view, is that VET is - to a varying extent - of a practical and applied nature. It is well known from cognitive science that most of the population learns more quickly, and retains more, through applied learning methods.

These are inherent quality advantages of initial VET, which may not only facilitate achieving quality, but also make vocational education more attractive, raise its status, and motivate teachers and pupils. However, more research is needed to support this assumption and to indicate how these intrinsic advantages could be exploited more systematically.

4.4 The contribution of quality systems to market transparency

The high number CVET suppliers in all European countries, and the variety of the training which is on offer, creates problems of transparency, both regarding the knowledge and access to the CVET provided as well as regarding its suitability and quality. Some have argued that, following the competitive market logic, this situation is likely to resolve itself over time. But this is only happening to a certain extent, for reasons such as:

- most companies in Europe lack a clear training strategy
- customer needs are often ill-defined; the net outcome is that a lot of CVET is supply-pushed rather than demand-pulled
- it is almost impossible to assess the real value and return of CET
- the public sector is an important player in the field, either directly (supply of training through publicly funded organisations), indirectly (incentives and benefits for certain types of training) or as an important customer itself.

Thus, quality problems, insufficient transparency, and unevenly functioning of market mechanisms are the outcomes of a number of interacting situations. A more transparent supply and demand situation would appear to benefit all parties involved.

The introduction of quality control arrangements in CVET - by public or independent bodies, or by providers and suppliers themselves - is often driven by a desire for higher market transparency, and the belief that such arrangements will indeed yield the expected outcome. A more transparent CVET market with in-built quality control is seen by many as an important asset for economic growth and competitiveness. In most areas of CVET, a strong argument could be developed in favour of public involvement in these developments, particularly when it comes to issues of certification and supporting innovative quality approaches

Many efforts have been undertaken in recent years for improving quality assurance in CVET, often with positive results. It appears to be too early, however, for judging whether such mechanisms have been successful in terms of market transparency. Of course, some improvements are always noted when quality arrangements are set in place. Whether this is the most effective way of achieving this, is another question.

A related topic to be mentioned is that, although many training providers have undertaken considerable efforts for improving the quality of their programmes, the direct correlation with positioning on the market and market success has still to be demonstrated. This may be a question of time - but it might also indicate again that market mechanisms do not function optimally in the training sector.

Finally, market transparency is likely to become an issue for initial VET as well, because of the growing decentralisation and customising of provision. Thus, traditional quality assurance mechanisms for initial VET may have to adapt as well.

4.5 The availability of tools to support the adoption of quality approaches

Quality assurance, control and management approaches will not materialise if those involved cannot rely on a number of appropriate standard tools. By using relevant criteria, models, checklists, methods, etc. those involved in particular types of VET provision would be able to establish their quality system with minimal effort and no need for reinventing the wheel.

However, much needs to be done in this area. Although various interesting developments are taking place across Europe, there is need for research on, and development of appropriate tools such as:

- generally accepted quality standards, norms and criteria which are suitable for particular types of VET, including mechanisms for assessing to what extent these standards have been reached
- appropriate and efficient methods for undertaking adequate training needs analyses at company, sectoral and/or regional/national level
- guidelines and methodologies to assist companies in drawing up adequate specifications for their training providers or their own training departments - in order to match training needs with business requirements
- clear guidelines on the most suitable didactic methods in particular circumstances: nature of the subject, level of target group, resources and time available, ...
- a comprehensive range of assessment and evaluation instruments and tools - including self-assessment methodologies - to cover all aspects of VET delivery
- appropriate quality indicators to monitor and assess quality developments, as well as methods to determine and use these
- well-documented case studies which show how quality approaches have been applied - including results obtained and the lessons learnt.

Most of what is listed above already exists in one way or another. What is needed is integration into comprehensive and more specific guidelines and tool sets for policy makers, VET suppliers and users. Existing examples are toolboxes and complete quality assurance methodologies which have already been developed by some larger companies.

Two critical remarks need to be made in this regard. The first aspect concerns the scientific validity and reliability of much of the existing tools, criteria and underlying concepts. Few of them seem to be based on scientifically substantiated methods and approaches. So far little attention has been paid to an explicit discussion of quality criteria, their methodological analysis, their design principles and the quality perspectives on which they are based. There is scope for more methodological efforts and empirical research to underpin the current and future quality tools.

A second critical remark is the danger that norms, quality criteria and linked control mechanisms predominantly focus on input and output characteristics, as well as on legal and administrative regulations. Although this helps in improving quality and apparently the public accountability (for publicly funded VET), it does note necessarily reinforce the development and application of effective management structures for quality assurance and continuous quality improvement. In other words, insisting on quality in VET will not automatically lead to Total Quality Management (discussed below).

4.6 The relevance and added value of industrial quality practice (TQM and ISO 9000) to vocational training

4.6.1 Total Quality Management - TQM

The growing interest in TQM in all types of companies and organisations has not passed unnoticed in both the initial and continuing VET sector. Currently, many VET providers across Europe have started to adopt TQM in part or in full, including strategies for customer orientation, quality assurance, continuous quality improvement and process orientation. Most of these recent quality approaches have been adapted from methods which had proved their usefulness and effectiveness in other sectors. Many quality assurance methods in vocational education and training are based on a classical typology of a training provider who delivers particular courses and programmes. This facilitates the analogy with industrial production and mass services - and hence the quality philosophy adopted there.

When a growing number of organisations are adopting TQM concepts and methods - both in initial and continuing vocational education and training - they do so because they believe that this will improve the quality of their provision. Actually, in initial VET, the main advantages which can be observed with the 'early adopters' are improvements of:

- external quality perception and image, thanks to clearer internal policy choices, better customer orientation and more effective marketing
- internal organisation, with more effective management, higher staff motivation, and more open and efficient internal communication
- non-educational services, i.e. the services and activities provided by the institution in addition to the delivery of the course programme (registration, administration, ...)
- education services and products: the relevance of the course programme, the didactic quality of instruction, the effectiveness of the needs analysis, ...

The same benefits might apply in continuing VET; in addition, for market oriented CVET, there is the potential advantage of improved competitiveness because of higher customer satisfaction and more efficient internal processes.

Despite the early successes of adopting of TQM principles by VET providers - so far only a marginal phenomenon - it has become clear that the mere adaptation of concepts and methods from other industrial sectors has its limitations. Indeed, given the demand and provision of e.g. customised training, training as part of consultancy, open learning, in-company and on-the-job training, etc. VET provision is becoming even more different from an 'industrial production chain' analogy. A second possible problem with adoption of TQM in VET, is the focus on the internal organisation and processes, not necessarily on the design issues. Actually, TQM refers for the design to the customer, but except in business-oriented CVET, the customer in VET provision is either unknown, or is not in a position to specify its demands.

4.6.2 ISO 9000

ISO 9000 is a series of international standards for quality assurance, which is only a subset of Total Quality Management. The norms are heavily process-oriented, with general descriptions of specifications - but with a terminology derived from manufacturing. The underlying principles of the standards can be summarized as follows:

- the organisation has clear quality objectives
- clear agreements exist between everyone involved
- the organisation has the resources to achieve the required quality level ('capability')
- the organisation is free to define which processes and resources are needed in order to ensure the quality of its products or services
- all processes and systems are under control, with evaluation and modification when appropriate
- everything needed for quality assurance is documented
- quality registrations allow verification and 'proof' of quality assurance.

If an organisation considers that it complies with requirements, it must ask a recognized audit organisation to undertake an external audit of its quality system. If this audit demonstrates the conformity with the ISO requirements, a certificate is awarded.

Adoption of the ISO 9001 or 9002 standard seems suitable as an operational framework for quality assurance for the delivery of VET, since

- it requires the setting of objectives for VET, and so improves transparency of the training provided
- it considers VET not as an isolated process but in the context of an institution's quality objectives
- it can be a means for achieving European compatibility of quality management in VET.

However, application of the standards is not obvious. The requirements have to be 'interpreted' before they can be applied by a VET provider. This interpretation relates to both the terminology - which is relatively easy - as to the processes concerned - which is sometimes less straightforward. Also, the order of the different paragraphs will appear 'unnatural' or even 'illogical' to many people from the education and training world.

When analysing the current state of affairs on the application of ISO 9000 standards (in general ISO 9001) by the VET providers in European, the overall conclusion must be that such certification is still a marginal phenomenon. However, there is a strong and growing interest, following, country by country, the application of ISO 9000 in other sectors. The main arguments for certification appear to be:

- improved market image, in particular a confirmation of a leading role
- response to the demand of main (certified) customers
- get official recognition for the quality efforts undertaken

Main benefits of ISO 9000 certification of CET providers are reported to be:

- the certificate is easily appreciated externally
- public CET providers can demonstrate their adherence to professional standards
- much ISO 9000 expertise is already available
- it provides a visible and understandable focus

for internal quality improvement
- the compulsory requirements (e.g. quality policy, manual, procedures, audits, ...) provide an overall, measurable framework for quality efforts.

The experience with ISO 9000 in initial VET is currently even more limited, with only a handful of vocational schools (e.g. in Belgium and Denmark) which have already been certified. The Danish policy developments are worth mentioning. Since the early '90s, a number of school quality projects have had the ambition to get an ISO 9000 certification, and actually several ones obtained it. However, in its 1995 Strategic Quality Plan the Ministry of Education argues against such certification of quality control systems in relation to the ordinary initial VET. The arguments against certification of such courses were related to a fear that this could hinder creativity and innovation, and might lead to a needless overlap with the audits by the inspectorate. The main line of reasoning is that ISO 9000 should only be applied for contract education, where a school might need to document a quality control system conforming to internationally acknowledged requirements (e.g. the ISO 9000 standard) to get a sales contract.

It should be noted that the Danish Ministry's interest in supporting the many different school quality projects was originally motivated by a wish to test the applicability of the ISO 9000 concept as a standard in VET activities. As a result of the development work of recent years, the Ministry has now concluded that vocational colleges should not try to establish an externally certified quality control system in relation to the initial VET courses (which add up to 80% or more of the activities), but that this might well be used for income-covered activities.

Thus, the ISO 9000 certification will not put an end to the debate about quality assurance and quality management in training institutions. It must be considered as a formalised tool for assuring quality in VET provision, while the definition of content (including quality criteria, indicators, and evaluation procedures) will have to be derived elsewhere. But it must also be recognised that there are, as yet, no alternatives to ISO 9000 with all the same advantages, particularly the recognition by companies from other sectors, and the international dimension. Eventually, it will be the market which will decide whether (and when) the cost of certification is worthwhile. A general feeling is that, although ISO 9000 is maybe not the best approach, the VET world would benefit from standards which are 'like ISO 9000' but more specifically geared to the education and training world. In several countries, initiatives in this direction are being taken, but it is as yet unclear whether these will lead to standards accepted by the market - not to speak even of international standards.

4.7 European cooperation and the European dimension of the quality debate

Over the last decades, education and training issues have increasingly become discussed at European level, and also quality issues are now becoming part of that agenda. This should not come as a surprise: both the TQM movement and the ISO 9000 certification trends are international in scope; and innovation in education is has been fuelled by major European education and training initiatives which involve cooperation of many education and training providers all over Europe.

Some argue that indeed the very existence of the thousands of PETRA, COMETT, ERASMUS and TEMPUS projects has increased awareness of the true determinants of education and training quality across Europe and has so given a fresh stimulus to the reflection on the purpose, standards and quality of education and training. The cooperation schemes are thus an important incentive for improving local programme quality, and have often complemented the 'national thinking' on quality issues. There also the well-established, traditional efforts of CEDEFOP to harmonize vocational qualification specifications at EU level for many skilled job categories. CEDEFOP has also funded comparative research on many VET issues which are related to quality.

Overall, however, European cooperation and exchange of experience in regard to specific quality issues in VET has so far been limited. The quality debate is still predominantly a national affair. What is needed, however, is a better insight in what aspects are most relevant to be dealt with at European level. In other words, what is the added value and what are priorities in relation to, e.g.:
- research and studies conducted on behalf of European organisations such as the European Commission and CEDEFOP, and international organisations like the OECD, UNESCO and the ILO
- exchange of experience and tools, and dissemination of good practice

- assessment and certification of VET providers and/or programmes at European level
- development of European quality standards
- reinforcing quality assurance principles within projects supported by the LEONARDO programme or the European Social Fund
- support for improving market transparency for particular types of (continuing) VET provision at European level.

These are not only practical issues, but also questions of political importance, since the subsidiarity principle for education and training is now firmly embedded in the Maastricht Treaty. Moreover, this is a very sensitive area in all European countries, with many issues on which even a national consensus is lacking.

Chapter 5 Conclusions and recommendations for further research

5.1 A framework for analyzing quality of vocational education and training

We have seen in this report that quality is a complex topic in vocational education and training. The complexity is the result of the interaction of many aspects:

- the variety and range of VET programmes and providers
- the different purpose of VET provision
- the number of stakeholders involved
- the different quality perspectives which are possible.

At present, it does not seem possible - or even desirable - to develop some unified theory within which all quality issues of VET could be discussed. What is possible, however, is to develop a number of frameworks or models which can serve as a guide for analysis, further research and understanding of the issues at stake. Several models could be considered. Those presented in this report are all based on a concept briefly developed in the book '*Achieving Quality in Training*' (See references, pages 277-278), enriched by the contributions of the experts who wrote the national reports.

The models shown are very similar and have a '*layer*' structure in common. The 'layer' corresponds with the level at which quality is considered. One may distinguish between five and seven 'layers', depending on what aspects are grouped. In this report, five layers are considered:

- policy and administration
- VET institution/organisation (school, training institution or provider)
- training programmes and courses
- teachers and trainers
- trainees/students/pupils and their learning process.

The first model (see below) looks at quality in education and training simultaneously from two dimensions. The first dimension consist of the different layers at which quality is considered (see above). In this dimension the main concern at each level is how effective objectives are met. The second dimension is the difference between quality of design - defining objectives, goals and content - and quality of conformance - effectiveness in meeting what was planned. With these two dimensions one can draw a 5x2-matrix in which most quality considerations can fit:

Model 1: Quality layers versus quality of design and conformance in VET provision

Layer	Quality of design		Quality of conformance	
	Initial VET	Continuing VET	Initial VET	Continuing VET
Policy & Administration	*Balancing educational demands* *Completeness of provision* *Streamlined administration*	*Defining company training needs* *Marketing strategy* *Choice of delivery mechanisms*	*Monitoring policy Accuracy, speed and flexibility of administration*	*Understanding impact of trends on training requirements*
Institution	*Internal organisation* *Personnel policy* *User involvement*	*Customising* *Business services* *Image control*	*School activities* *Management of financial resources*	*Maintaining service levels*
Course programme & delivery	*Relevance of content* *Internal cohesion* *Relevance* *Student manuals*	*Linking needs to appropriate training* *Choosing the right training format*	*Conformance of programme to stated design and objectives* *Course achievements*	*Courses which meet needs* *Use of user feedback*
Teacher, trainer	*Expertise* *Didactic and pedagogical abilities*	*Expertise* *Professional trainer skills*	*Maintaining competence* *Updating*	*Retraining* *Consultant capacities*
Student, pupil, trainee	*Open attitude to learning* *Initial qualifications*	*Continuous learning ability*	*Pupil/student achievement*	*Performance improvement*

A distinction has been drawn between initial VET and continuing VET, with examples of what might be considered put in *italics*.

This table, which includes 10 areas for both IVET and CVET, is a relatively simple way for bringing some order in the various factors which contribute to the quality perception. In other words, the 'total' quality of VET provision will depend on the extent that quality is achieved simultaneously in all 10 areas. For instance, there may be very relevant training strategies defined at policy level, but if one lacks the trainers to implement them, the end-result will be poor. Similarly, an institution may have excellent internal quality assurance and management procedures, but if the design of its programmes is not based on real needs, again quality will suffer.

Three general remarks can be made in relation to this model:

- Quality paradigms in education and training were traditionally concerned either with the lower levels (teaching, learning) or the highest, policy level (education policy). The current quality management oriented ideas complement these traditional approaches by emphasizing more the middle level, the organisational and programme aspects.

- Quality of design and quality of conformance are no independent processes. Both interact through a range of different mechanisms. One way of visualizing the difference is considering quality of design as the outer loop quality process, concerned with strategic and long term issues, and quality of conformance as a set of inner loops which contribute to incremental quality improvement.

- Quality is not only an issue of the provider (as shown in the model). In particular for CVET, the layer model also applies to the customer, i.e. the organisations in need of training: they need a training policy as well, effective internal management, etc. This aspect will, however, not be developed here.

This model can also be used as a framework for defining assessment strategies and quality indicators. Examples of areas for assessment and potential quality indicators are provided in the model below.

Model 2: Examples of areas for assessment and quality indicators in VET provision

Layer	Quality of design		Quality of conformance	
	Initial VET	**Continuing VET**	**Initial VET**	**Continuing VET**
Policy & Administration	*Adequacy of identification of training needs* *Effectiveness of translation of training needs into objectives and designs*	*Idem (but more likely to be at micro-economic level)*	*Cost-effective use of resources* *Adequate balance of training provision*	*Systematic implementation of defined policy* *Cost-effectiveness of training plan*
Institution	*Efficiency of the training plans in achieving desired results* *Suitability of premises*	*Successful positioning on the market* *Adequate offer of training courses*	*Efficiency of the training and financial management* *Staff motivation*	*Cost-efficient delivery* *Quality assurance of processes*
Course programme	*Relevance of content and methods*	*Customer orientation*	*Provision of training tools and materials*	*Customer satisfaction*
Teacher, Trainer	*Adequate skills and qualifications*	*Relevant experience*	*Performance during the course*	*Attitude towards trainees*
Student, pupil, trainee	*Adequate qualifications and preparation*	*Motivation*	*Trainees's success rates*	*Meeting needs of employment*

As one can observe, in VET 'Quality of design' refers to the relevant choice of the input factors, as well as the design and planning phases of the processes concerned. 'Quality of conformance' in VET refers to the processes themselves as well as their outputs. Thus, these models can also be useful from a systems theory point of view.

A related model or framework is one whereby one tries to identify at each 'layer' which is the most appropriate 'model' or scientific theory and build quality strategies and operations from those theories. 'Quality' then becomes an aggregate notion, using a balanced selection of concepts from a range of particular theories.

Model 3: Linking Quality with theories, strategies and operations

Layer	Models and Theories	Strategies	Operation
Policy & Administration	*Economic and business approaches* *Legislative approaches*	*Cost-benefit analyses* *Laws and implementing decrees* *Standards*	*Financial frame conditions* *Compliance with regulations and standards*
Institution	*Situational concepts* *Structural theories* *Organisational Behaviour* *Communication*	*Organisational analyses* *Company climate analyses* *Learning organisation* *Total Quality Management*	*Efficiency criteria (turn-over, profit, error rates, etc.)* *Customer satisfaction* *Benchmarking*
Course programme & delivery	*Didactic principles* *Pedagogical principles* *Methodological concepts*	*Teaching and learning objectives* *Modular set-up* *Evaluation strategies*	*Costs* *Reliability* *Validity, representativeness*
Teacher Trainer	*Motivation theories* *Recruitment theories* *Conflict theories* *Action theories*	*Human resource management* *Quality management* *Training of Trainers*	*Evaluation strategies* *Self-observation* *Observation of others* *Interview techniques*
Student, pupil, trainee	*Motivation theories* *Learning theories* *Cooperation* *Action theories*	*Satisfaction* *Increased learning* *Chances at workplace* *Flexibility in the company*	*Self-observation and observation of others* *Aptitude tests* *Test quality criteria*

These models could be further developed by identifying clearly the stakeholders at each layers, their expectations and their quality perspective. Other extensions include a clear definition of customer-supplier relationships, as well as the different types of outputs and their quality characteristics (this is linked to the assessment and quality indicators examples given in Model 2). Together, these models will then yield an overall framework in which, in principle, all aspects of Quality in VET can be discussed and linked to each other.

When it comes to implementation of quality approaches, the models can still serve as a starting point. It might be useful, however, to group the rows in the matrices into three categories:

- what can be done at central level (mainly policy and administration layer, but also partially the programme layer))
- what can be done at the level of the institution and the VET provider (institution, course programme and partially trainer layer)
- what can be done at the level of individuals (trainer and student layer).

From an implementation perspective, the use of input-output-models might also be useful. Such aspects are not developed further in this report, and would need a different approach. The next section provides a series of issues which merit further analysis and research - many of which concern implementation questions.

5.2 Recommendations for further research

The following paragraphs list a large number of topics which would benefit from further research. They were derived from an analysis of the 7 national reports and some additional research. It could be considered as a framework for action for researchers and vocational training experts at European, national and regional level. Some of these topics have been a concern for some time now, while others have fairly recently emerged on the agenda.

5.2.1 Vocational education and training policy

- ***The purpose of quality assurance and quality management approaches***
  Why are quality assurance and quality management approaches increasingly called for in vocational education and training? What are the reasons for the increased emphasis on quality in the policy debate on vocational training? What exactly is pushing training providers towards new quality approaches? What do they hope to achieve? What purpose should these new approaches serve?

- ***Decentralisation versus 'central' quality standards***
  One important trend observed in relation to vocational education and training, is a growing decentralisation of the state apparatus to let VET providers react flexibility to local demands and circumstances. At the same time, there is increasing emphasis on the establishment and enforcement of central or national quality standards, as a means of ensuring certain quality levels. Aren't these trends conflicting, and, if so, to what extent? Can they be reconciled?

- ***Quality strategies as a means of status enhancement***
  In many countries, initial vocational education suffers from a low image; sometimes it is even regarded as a kind of second-class education for those unable to attend general education. Quality approaches, in particular those closely involving industry as the customer, may not only lead to quality improvement, but also raise the status of vocational education, and motivate teachers and pupils. An important research topic is to investigate under what conditions this assumption is valid. To what extent are quality policies and strategies effective for status enhancement of vocational education and training?

- ***Added value of certification of training providers***
  Currently, different methods and systems exist for the recognition, labelling and certification of training providers. These arrangements range from a simple verification of compliance with certain criteria, to award of quality certificates (such as ISO 9001) after a thorough external audit. More clarity about the need and the added value of such forms of 'certification' by public or private bodies would be welcome, as well as their relative merits and disadvantages.

- ***Regulation versus free market forces for quality improvement***
  In particular in the continuing vocational training area, there are considerable differences, both within and across countries, concerning the intervention of the state for the regulation of the market and for ensuring minimal standards. In some cases, such input is virtually absent, with market forces supposed to be the regulating mechanism; in other cases, the public participation is observable through a range of mechanisms. Where and when is state intervention most appropriate? What can be left to market forces for quality improvements? Where and when do market mechanisms fully apply and where not?

- ***Specificity of the continuing and vocational training sector***
  Many of the more recent quality assurance approaches have been adapted from methods which had proved their usefulness and effectiveness in other sectors. However, it has become clear that mere adaptations from other industrial practices has its limitations. What is, from a quality assurance point of view, the specificity of vocational education and training? How should that translate into specific arrangements, concepts and criteria for quality assurance?

- ***Move towards new methods of training and learning***
  Many quality assurance methods in vocational education and training are based on a classical typology of a training provider who delivers particular courses and programmes. This facilitates the analogy with industrial production and mass services; however, such a model is increasingly inappropriate given the demand and provision of customised training, training as part of consultancy, open learning, in-company and on-the-job training. To what extent are quality assurance mechanisms also appropriate for such

forms of training and learning? How can the concept of quality assurance be applied to learning efforts within the context of a 'learning organisation'?

5.2.2 Vocational education and training systems

- ***Changing roles of public authorities and social partners***
  Across Europe, there is considerable variety in the type and forms of involvement of public authorities in the quality control mechanisms for both initial and continuing vocational training. What has proven to be a good balance between the involvement of both groups? What role for government in quality control of CET? What contribution from social partners in initial VET? And how are new demands put on VET systems changing the requirements in this regard?

- ***Stakeholder perceptions of quality***
  Quality is a relative concept which can only be defined in a particular context. In vocational education and training, there are many stakeholders, which perceive quality issues in different ways. What are the quality concepts, models and control systems used by each of the stakeholders of vocational education and training? On what assumptions are they based, and what quality paradigms do they reflect?

- ***Improved market transparency***
  The introduction of quality control arrangements in continuing vocational education and training is often based on the belief that such arrangements will yield improved market transparency in the sector. To what extent has experience shown that this belief is justified? What are the arrangements and conditions which are most effective for improved market transparency? Are market transparency and quality control in VET always linked?

- ***Effectiveness of quality approaches***
  The issue of effectiveness of traditional and new quality approaches in VET has two important dimensions: (1) what does effectiveness of quality approaches really mean; and (2) under which conditions are such approaches most effective? Is effectiveness mainly linked to the approach itself, or does it also depend on the context and the resources available - and to what extent?

- ***Quality assessment for quality improvement***
  Quality aspects of vocational education and training can and are being assessed in different ways and at different levels. What are the relative merits of different forms of assessment and quality evaluation in view of quality improvement? How can assessment methodologies be effectively used as an input to quality improvement, so as to complete the quality control system?

- ***The relation between quality of training and market success***
  Many training providers have undertaken considerable efforts for improving the quality of their programmes. To what extent can these efforts be linked to market success, in terms of programmes and their relation with success of trainees of the training market?

- ***Transversal and generic skills***
  The design of vocational programmes needs to integrate an increasing number of expectations, notably the preparation for an increasingly variable number of occupations, requiring the integration of more transversal and generic skills. To what extent does this influence the quality perspective? What is the real effect and added value of the generalisation of vocational programmes? How can the effects be measured?

- ***The changing role of the school inspectorate***
  Many countries have a strong tradition of school inspectorate which is facing a number of important challenges. What should be the role of a public inspection system in a VET system? On what elements should it focus? Should it be input-, process- or output-oriented? How should it relate to public and private providers of CVET?

5.2.3 Quality concepts for vocational education and training

- ***A comprehensive quality framework for VET provision***
  The quality discussion on VET aspects faces the problem of the large number of factors which intervene. There is need for some practical models and frameworks which facilitate the understanding of the different contributions to quality. What are appropriate models which serve this purpose? In what context can they be applied? How useful is the adoption of such frameworks for quality assurance?

- ***Quality concepts for design and implementation***
  Many quality concepts and criteria in VET are based on input- or output-aspects. However, from a process- and systems point of view, quality criteria are also needed at the design and implementation phase. What are adequate quality concepts and criteria for the design and implementation of VET programmes? How do they relate to output-criteria and results? How specific or standardized do they need to be?

- ***Functions of quality control systems***
  Although few will dispute the importance of quality in VET, some do question the added value of comprehensive quality control systems. What can and should a quality control system achieve? What functions should it serve? Who should oversee it? What quality attributes should be under its control? How can the effectiveness of the quality control system itself be measured?

- ***Evaluation criteria for achieving quality objectives***
  Even when quality objectives of a vocational programme are defined and agreed, it may not be obvious how to define evaluation criteria. What type of evaluation criteria should be defined at what stage - input, process, output and effect - in order to verify achievement of objectives? How can quality objectives be related to measurable and verifiable results? What are the most optimal moments to use particular evaluation criteria?

- ***Quality assurance methods and the examination of trainees***
  Examination of trainees is often seen as a special activity, somewhat independent from the implementation of a vocational programme. What type of relationship may or should exist between the quality assurance mechanisms for design and development, and the basis for undertaking examinations of trainees? What does quality assurance mean for examinations? How to relate examinations to the quality criteria and objectives defined in the design process?

- ***Quality management of institutions and the quality of the training***
  Quality management approaches of institutions, such as TQM and ISO 9000, focus on the internal organisation and processes, not necessarily on the design issues. What, then, is the relationship between such approaches and the end-quality as perceived by the user? In other words, are quality management approaches, derived from practice in business, appropriate for VET providers? In what context are such approaches cost-effective?

- ***The added value of ISO 9000 approaches***
  ISO 9000 approaches include the adoption of a standard - which is mainly process and quality assurance oriented - a rigorous audit process, and the award of a certificate. What is the added value of following such an approach compared to other quality assurance approaches? What is the significance of an ISO 9000 label for customers? What is the impact on the design of programmes? What is the cost/benefit ratio in the long run, both for providers and customers?

- ***Accreditation of continuing vocational training***
  In what areas can accreditation of programmes by independent providers be useful? Who should formally accredit courses or programmes? What is the interest for individuals to attend accredited training courses? Should accumulation of credits lead to a recognized qualification, and how? How to link a system of accreditation with recognized qualifications in IVET?

- ***Quality in in-company training and open learning***
  Most current quality approaches start from the provider and assume the development of traditional programmes. What are specific quality approaches or criteria for in-company training? Can quality assurance also be applied - and how - to on-the-job learning? What are quality characteristics and criteria for distance training and open learning approaches?

- ***Quality in collaborative training development projects***
  Increasingly, training development is based on the temporary association of organisations for a particular project. This brings issues of project management and collaboration in the equation. What are effective quality assurance approaches which take into account such additional complicating factors? Is quality assurance feasible at all in such project-based collaborative contexts? What are decisive quality objectives and criteria to be respected?

5.2.4 Implementation of quality approaches at the level of the organisation

- ***Making people aware of importance of quality concepts***
  Introducing quality assurance is not merely a technical issue. For quality management approaches to be effective it is also necessary that the people concerned develop a quality attitude and understand their role in the generation of quality. What quality concepts should be imparted to policy makers, teachers, trainers and students/trainees/pupils? What type of awareness-building is necessary and at what level?

- ***Human resources policies which facilitate the adoption of quality approaches***
  What human resources strategies are needed to implement and maintain quality approaches? How to keep people motivated for quality assurance procedures, in particular when these are perceived as bureaucratic? What should be the role of managers? How can quality approaches be related to the value and culture of a VET provider?

- ***The resources needed at institution level***
  Even when consensus is reached on what are the best quality assurance and control mechanisms, the issue of resources remains. What financial, human and other resources are needed for the implementation of quality approaches to be fully successful? What role have public authorities in providing these resources, and in which situations? In case of insufficient resources, in what areas or aspects of quality assurance, is lower than optimal performance most defendable? What are the short, medium and long term resource implications of particular quality approaches?

- ***Cooperation as a means to improve quality***
  Is cooperation between vocational training institutions and (client) companies a necessary condition for quality? What should this cooperation consist of? What are the critical factors? Are other forms of cooperation, e.g. between providers, also relevant mechanisms to improve the quality assurance process? Does cooperation eventually require less or more resources?

- ***Quality plans and objectives of VET providers***
  Implementation of quality assurance, control or management procedures is most effective in the context of a well defined quality plan and related quality objectives. How should such plans and objectives be formulated to be most useful? Can quality assurance be successful without such a framework? What level of detail should be included in the plan and objectives?

- ***Effective quality models for small VET providers***
  Many quality control systems are comprehensive and resource-intensive, in particular for small organisations. There is a risk of defining 'optimal' systems and procedures which are actually overkill for small VET providers. Are there simple but effective quality models for small VET providers, which take into account their limited resources and their need for extreme flexibility? What are the key quality success factors for small providers and how can these be used as the basis for a simple quality assurance framework?

- ***Quality assurance as a means for quality improvement***
  Quality assurance is sometimes associated with bureaucratic respect of rule, and therefore counterproductive to continuous quality improvement. How can this risk be avoided? What are the critical elements in a quality assurance method that will facilitate quality improvement? How can bureaucratic and technocratic use of quality assurance procedures be avoided?

- ***Shifts in internal quality assurance priorities***
  For companies who 'consume' a lot of training, in particularly training which has been developed internally, a shift is needed from a focus on assurance and optimising of training measures (quality of conformance), towards optimising the training as a response to business needs (quality of design). How do companies accommodate this requirement? How do they assess the relevance of their quality assurance focus? How can this be measured?

- ***Integrating didactic aspects within quality assurance***
  Synergy is required between business parameters for quality assurance and the more traditional pedagogic and learning psychology issues. How does this work out in practice? Can the didactic process be fully integrated in the quality assurance approach? How can one define and apply quality assurance to the learning process?

- ***Process evaluation***
  Despite the recognition of the VET system as an interconnection of a number of processes, and the importance of the process concept to quality assurance, quality in VET provision is still predominantly judged on the basis of output- or input-factors. What should process evaluation consist of? What elements of input- and output-evaluation should it include? How should it relate to process improvement?

5.2.5 Tools and support material for quality approaches in vocational education and training

- ***Tools for implementing quality approaches***
  Quality assurance, control and management approaches will not materialise if those involved cannot rely on a number of appropriate tools and instruments, which allow them to establish their quality system without need to reinvent the wheel. What existing tools (criteria, models, checklists, methods, ...) have proven useful in this respect? What instruments are lacking? In what context can certain tools be used? How transferable are these tools across countries?

- ***Quality indicators***
  What are criteria for determining quality indicators for vocational education and training? What type of indicators already exist, and which types are lacking? When and how can quality indicators be used? What makes quality indicators for VET different from those for general education? Should indicators be developed preferably at institutional or at macro-level?

- ***Case studies***
  The availability of well-documented case studies on how quality approaches have been applied - including the lessons learnt - could be instrumental in disseminating the quality message. What are, in this context the criteria for useful case studies? What case material could already be used? Who should develop and write case studies? How should these be disseminated and used for quality improvement in VET institutions?

- ***Training needs analysis methods***
  The quality of the design of VET programmes is highly dependent on the capacity to undertake adequate training needs analyses at company, sectoral and/or regional/ national level. What is current best practice in relation to such methods? What are the conditions for effecitive and efficient training needs analyses? To what extent can these methodologies contribute to the quality of design and to the quality assurance process as a whole?

- ***Assessment and evaluation***
  A very broad range of assessment and evaluation instruments and tools is currently used for different aspects of the VET sysem. What have shown to be appropriate methods, and in which context? How do evaluation and assessment really contribute to quality improvement? What can evaluation methods be expected to yield? What are resource and other implications of using particular assessment instruments and methods? What kind of assessments are absolutely necessary for quality assurance and control?

- ***Didactic methods***
  Different didactic approaches yield different results in different citrcumstances - and thus affect the quality of the process. In what conditions are particular didactic methods most suitable? How easily can certain approaches be integrated in quality assurance systems? What is the longer term effectiveness and added value of certain didactic methods?

- ***Value of self-assessment***
  Self-assessment methods for all stages in the VET process are becoming more widespread, particularly since they are often a good compromise between added value and costs. In what phases (training needs analysis, training measures, outcomes, ...) are such methods appropriate or at least defendable from a quality assurance point of view? What is needed to make such methods more general and transferable? Which self-assessment practices are both reliable and a stimulus for quality improvement?

- ***Methodologies for training specifications***
  Many firms are increasingly faced with the question of translating deficiencies or potential problems in their operation into training specifications. What methodologies exist to help companies drawing up adequate specifications for training providers or their own training departments? How can they indicate what they need or require in terms of training? To what extent are such methods transferable?

5.2.6 European added value

- ***The European dimension of the quality debate***
  The quality debate and the implementation of new quality approaches in VET is still predominantly a national affair. What is the added value of considering such issues at a European level? What can countries learn from each other by exchanging information on policy and measures? What are examples of best practice which merit dissemination across Europe? Are their specific aspects of the quality debate which should best be discussed at European level?

- ***Added value of European cooperation in VET***
  The COMETT, PETRA and FORCE programmes (now integrated in LEONARDO) have had a considerable impact on the attitudes and perspectives the European organisations who have participated in them. To what extent has this modified prevailing quality paradigms? What quality aspects have been most influenced by the implementation of these programmes. What types of quality improvement should the LEONARDO programme try to achieve, both directly and indirectly?

- ***European versus national research***
  Much analysis, study and research still needs to be undertaken in relation to quality, quality assurance and quality improvement of VET systems. What should be the balance of national versus European research in this matter - for national and European organisations? What should European research stand for? What can it be expected to yield? Should one search for national or rather European models and frameworks? How should European research results be disseminated and communicated?

- ***Relevance of training observatories***
  A training observatory is an institution which presens policy makers, administrators, VET providers and individuals with analytical and timely information to enable them to make informed choices. To what extent would the creation of a European network of such training observatories contribute to the quality debate? What type of information should be gathered, analysed, exchanged and reported upon? Who should be the prime customers of such organisations? Should they assist in international standardisation of quality criteria and norms?

- ***Specific contexts which require a European quality approach***
  In what fields is a European market of VET provision developing? In what cases do European-based quality approaches make more sense than national ones (e.g. advanced training, distance learning, language training, ...)? What would such approaches consist of? Would they need to focus on models and tools, or also include assessment and certification? What type of national quality approaches need Europeanization?

- ***Accreditation and certification at European level***
  The ISO 9000 certification system is an example of an accreditation arrangement with European and even international recognition. In what areas (programmes, fields, sectors, ...) or for what aspects is there scope for other types of European approaches to certification and accreditation? Can certain assessment and evaluation methodologies be standardized at European level, and what added value would that bring?

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